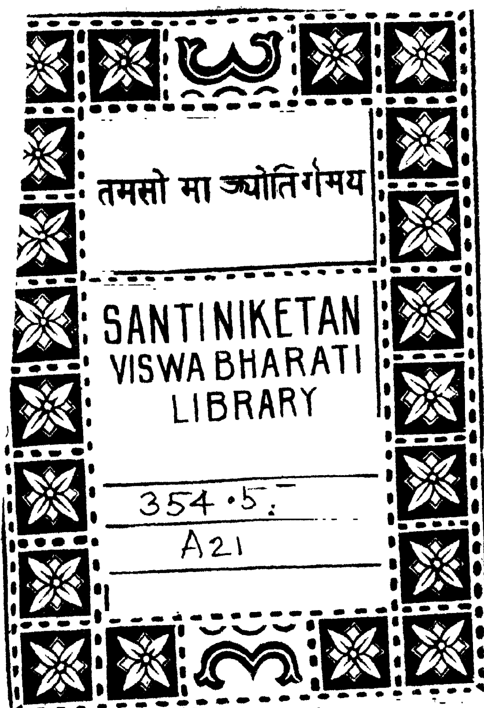


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(AN ESSAY ON INDIA'S MILITARY PROBLEMS)

BY

B. P. ADARKAR, M.A. (Cantab.)

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To

The Defenceless Millions of India

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ERRATA

Foreword, page 8, line 15, for *tend* read *tends.*

„ „ 12, line 12, omit *has.*

„ „ 14, line 1, for *of India* read *on India.*

„ „ 20, line 2, for *her surplus* read *her surplus wealth.*

„ „ 24, line 7, for *threat* read *threats.*

Page 62, line 32, for *prommelling* read *pommelling.*

„ 88, Map, for *London to Prague 1 hr.* read *London to Prague 5 hrs.*

„ 109, line 13, for *were* read *was.*

„ 122, Notes on Map, line 12, for *tofards* read *towards.*

„ 285, line 19, for *Rajputs* read *Rajput.*

„ 291, line 12, for *Farms, Educational units* read *Farms, and Educational units.*

„ 293, line 17, *Table I* delete.

FOREWORD

THE recorded History of India now goes back to some 2,500 years and unrecorded history to about 5,000 years. In the course of this long period, Indian History has been replete with many fateful "incidents," wars, revolutions, and catastrophic onslaughts, dynastic and religious changes and other happenings, which made India lose her paramount position and degenerate into a vassal state. Thoughtful students of history often ask: why, on the eve of many of such eventful incidents, did those responsible for the defence of India's political and social system invariably behave in such a stupid way as subsequent events proved? Why, for example, was it not possible for the kings of Northern India to forget their mutual jealousies and combine, when Prithviraj of Ajmere, the western-most Hindu power, was menaced by the Turkish hordes of Mohammed Ghori? Why did they keep neutral, and why, as legend asserts, did one of them even go to the length of assisting the invader, and by such action bring perdition not only on Prithviraj, but also on himself and the whole structure of Hindu civilisation? This was not an isolated incident, for events like this occurred again and again on Indian soil. In 1526, the Pathan and Rajput rulers of Northern India sent an invitation to Babar at Kabul to invade India and turn out the unpopular Ibrahim Lodi from the throne of Delhi. The latter indeed was uprooted, but the very same rulers who sent the invitation had shortly to pass under the knout of the Great Moghul. Again in 1756, the Moslem and Hindu nobles of Bengal conspired to invite the English at Calcutta to attack Nawab Serajoddowla. The consequences of this

action are written large in the history of India. Again four years later, the Mahratta leaders quarrelled amongst themselves and with the Jats and Rajputs, on the eve of the fateful battle of Panipat. This led to such a great weakening of the power of Indian resistance against the foreign aggressors that it led eventually to the annexation of this huge country by a handful of men hailing from a distance of 5,000 miles. Indian History is full of such large-scale errors and many a thoughtful reader probably may ask himself: why did history repeat itself in such tragical manner in India?

The thoughtful reader will have no difficulty in recognising the pivotal lesson of Indian History, *viz.*, that Nature and Geography designed India to be one economic and political unit, and any attempt or incident which tend to divide her into fragments political or economical, can only result in tragic consequences. The Indo-Gangetic valley may be cut up artificially into the Punjab, U.P., Bihar and Bengal, but the Ganges cannot be cut up into pieces, nor can it be turned back into provincial channels, nor is it possible to raise a barrier between the plains of the Punjab and Hindusthan proper. Any political incident in the Punjab or Bengal must have, even much sooner than is expected, its repurcussions throughout the length and breadth of India. But in spite of these clear lessons of history, the very vastness of the country, and the presence of medieval and feudal forces of reaction, such as bigotry, provincialism, petty jealousies and communal patriotism lead to fissiparous tendencies, which override the supreme interests of the country as a whole. Distracted by these forces, the leaders of Indian Action, as if driven by an inexorable Fate, have marched to their perdition again and again in the course

of her chequered history. And it will probably surprise many of our readers to learn that we are at present marching through such a fateful period. This will be clear to any one who has the patience to go through Prof. Adarkar's thoughtful and informative volume before us.

Let us see what the theme of this book is. For nearly two hundred years under British rule India has enjoyed immunity from foreign aggression, and has enjoyed almost complete internal tranquillity. As on former occasions (*e.g.*, during the long Moghul rule, 1556-1737), she has been lulled into the belief that the menace of foreign aggressions has vanished for ever, and even if it returns the suzerain power has arms strong enough to deal with it effectively. The political incidents of the last few months may have given a rude shock to this belief in the few thinking minds. But Indian leaders, as a whole, have certainly not sensed the proper magnitude of the impending danger. They are too busy in voicing their own internal and psychological quarrels, and different sections are bargaining for the crumbs and the refuse that have fallen or are likely to fall in the near future from the table of the suzerain power in the form of the Reforms. The largest and the most powerful party seems to be of the idea that if the menace of foreign aggression ever materializes, India should not attempt to meet violence with violence, but will be better advised to practise *Satyagraha* and thus melt the heart of the aggressors. This is in consonance with the political philosophy of Mahatma Gandhi.

In the book before us, Prof. Adarkar very ably refutes all these fallacies, which are (1) that there is no danger of immediate foreign aggression, and that if any aggression occurs in the near future the suzerain power is strong enough

to defeat it, and (2) that non-violence (*Satyagraha*) can ever be an effective weapon against foreign invasion and in internal quarrels, and finally he discusses the ways and means by which an effective defence can be organised against the not very distant foreign aggressions.

DANGERS OF FOREIGN AGGRESSION

Thanks to the policy that has prevailed for the last 180 years, the British Government have relieved the Indian intelligentsia of the task of thinking about the defence of their own land. The Indians have no knowledge of military problems and of the military machine and its working in India. But that all is not well at present, and that there is great nervousness in the British High Command about the future defence of India is apparent from the recent appointment of the Chatfield Committee. The Government, however, instead of taking the public into confidence, has adopted a hush-hush policy. No Indian has been taken on this Committee, and Indian leaders so far have expressed no strong desire to interest themselves in the problems of defence.

Prof. Adarkar, in the first few chapters, gives an admirable account of the changing tactics of modern warfare, due to the development of the aerial fighting arm, of the poison gas, and of the mechanisation of the army. He has discussed at length the relative strengths of the Great Powers in their different fighting arms, their *capacity* to manufacture and retrieve the losses during a great conflict, a point to which sufficient importance is very rarely attached. He further discusses the conflicting ideologies of the world, the aims, ambitions, and policies of the Great Powers and their bearing on India.

THE CHANGING TACTICS

Briefly speaking, Mr. Adarkar shows very clearly that the aerial fighting arm, poison gas, and mechanisation have completely changed the tactics of war. The navy has become more or less obsolete, as big ships present admirable targets to the swiftly moving bombing planes, moving at the rate of six miles per minute, and flying at unapproachable heights. Due to the introduction of the Diesel engine, the fighting bombers can now cruise 3,000 miles, with full load on and without refuelling, and 7,000 miles without load, at a speed of 350 miles an hour. Germany and Italy have given particular attention to the development of their fighting aerial arms and have completely outstripped the British and the French. As Commander Fletcher says " On account of the development of the aerial fighting arm, England has ceased to be an island." The navy having lost its importance, she can no longer hector other nations to submission by declaring a naval blockade or taking sudden naval action as she did during the Great War against Germany, or when she and France coerced King Constantine of Greece to abdicate, or earlier dictated to China by the Gunboat Policy. On the other hand, it appears that the tables now have been completely turned. Germany under the Nazi régime has worked for autarchy, *i.e.*, self-sufficiency in all the essential industrial needs, so that a future blockade in the event of war, is expected to be futile. On the other hand, the bombing aeroplanes from the western sites of Germany have to pass most of their journey over the sea, and London will have barely 10 minutes' notice to get her anti-aircraft equipment in action before the Germans are over the City. This, and the further fact, that nearly one-third of the population of England is concentrated in a

small area round London, containing a large proportion of the vital industries, has rendered London according to competent observers, a veritable Achilles' heel of the British Empire. Germany spotted this weak point five years ago and started to develop her air arm with a view to take advantage of it. It is largely with the aid of her air arm that Germany, under the leadership of Hitler was able to burst the shackles with which the Allies had sought to strangle her in the Treaty of Versailles. A further factor of great importance is that Italy, which before and after the Great War could be made to dance to the tune of the Allied music, has, under Mussolini, has developed a strong mind of her own and is demanding loudly and effectively the concessions which were promised to her as the price of her joining the Great War in 1916. In the case of the Abyssinian War in 1936, she met the threat of naval action by Britain by the counter-threat of aerial bombing of London, and the closing of the Mediterranean route and thus stalemated the sanctions proclaimed by the League of Nations.

It appears that Germany and Italy in the west and Japan in the east, confident in the superiority of their air arms, are now successfully hectoring their former victors and allies. Otherwise, the Munich surrender cannot be explained; for, the English and French politicians are no fools, and they would not have allowed themselves to be dictated by Hitler to surrender unless there was some grave reason behind it. Col. Lindbergh's report on the comparative strength of the air arms makes this interpretation abundantly clear.

This "decline of British power" in world-politics is not a matter for congratulation but of grave concern for us, one may almost say a matter of life and death. Under

British rule of roughly 200 years, the bracket of British rule as Adarkar puts it, Indian intelligentsia have awakened to a sense of the importance of national unity, they have been thinking of the day, when having settled their internal politics amicably, they will present a united and irresistible demand for *Purna Swaraj*, and thus enable India to take her rightful place in the Comity of Nations. Is not all that ambition likely to be smothered in the smoke of the coming Armageddon? For they must be great optimists indeed who can believe that the march of events has stopped with Munich. The very laws of Nature forbid such a conclusion: the Germans and Italians are nations with much larger birth rates; their country is insufficient even for their present numbers and the natural resources which they command are inadequate to their status and ambition as Great Powers. They cannot remain satisfied with what they have got; in fact, the philosophy of life which they have adopted is wholly against their remaining content with their present position. So whether to find more room for their still unborn millions or to get colonies for making up their deficiency in the essential minerals and raw materials, they are sure to remain aggressive and to nibble at the vast possessions and trade of England and France, at whose expense alone they can grow. On the contrary, the Anglo-French block constitutes the self-satisfied countries, the "haves," with declining birth rates, and sufficient colonial possessions to yield to them all that they require for a modern civilized existence.

To the two great aggressive powers of Germany and Italy must be added Japan in the east, a source of far more potential danger to India than either of these. Prof. Adarkar sums up, in Chapter VII, the position of Japan and her

ambitions of India. I commend the reader to a careful perusal of this Chapter.

JAPAN

Whereas the story of Japan's rise as a great Power is sufficiently well-known, the secret of her success in her experiments with modern civilisation, the extent of her political and economic problems, and the vastness of her ambitions with their bearing on India are not properly realized or appreciated. She is not a Nation in the autumn of her life, like France or England, looking complacently to a satisfied future; nor is she without a past like the great United States of America, trying to experiment with new-fangled social or political ideas. During the early middle age, she built up her culture by borrowing freely from Korea, China and India, but unlike these countries, she never allowed herself to be a mere slavish imitator, or a blind adherent. Her mentality towards any particular dogmas can be well understood from the fact that, though she adopted the cumbersome Chinese pictograph[1] for expressing her thoughts, she early realised that blind adherence to this system would make education impossible except for a microscopic minority of her population, and she would thus be doomed to a back position amongst nations. She, therefore, developed side by side with the pictographs, which were set apart for use by pedants, a

[1] The Chinese express their thoughts not in 'language' consisting of words with definite sounds as we understand, but in symbols, very much as we do in the case of Algebra. Needless to say, the system though possessing certain advantages takes human intelligence to the breaking point, and hence only a microscopic minority could hope to become "Scholars." The attempt of Hu-shi was directed at evolving a common articulate and alphabetic language for China.

simplified syllabic system (*Katakana* and *Hirakana*) which rendered universal education possible. Great China, proud of her past, learnt to appreciate this lesson only 20 years ago, when, under the dynamic leadership of Hu-Shi, she evolved for common use a system of simplified alphabetic writing for the education of her masses. Japan adopted Buddhism in the 6th century A.D., but this did not lead to a dull vegetarianism in thought and politics, as in this country. On the contrary, that aspect of Buddhism which is most popular in Japan is the *Zen*, which teaches one to approach every problem and to perform every action calmly, with determination and will and without passion or loud protestations. In Japan, this has led to the cult of *Bushido*, the Samurai creed of dare-devilry and sacrifice of the individual for a cause, and to the admirable habit on the part of the people of doing everything quietly without being demonstrative. Many pundits in India criticise Japan for her so-called deviation from the path of Buddha's teachings, but as we shall see, at least on one point, it is doubtful whether these pundits have ever read the Gospel of Buddha first hand, and as carefully and intelligently as some of the Japanese savants like Suzuki. For the Gospel of Buddha is neither pure *Ahimsa*, nor vegetarianism; it extols above everything Intelligence, and a rational and intelligent, as distinguished from mystic and emotional, approach to every personal, social or political problem. These pristine qualities of Buddhist thought account for the greatness of India from 500 B.C. to Gupta times when she was guided more by Buddhist than Hindu thought.

The Japanese are, above all, Pragmatists, *i.e.*, they never attach an absolute value to a creed or dogma, but are guided by its practical value. They have thus adopted

many modern institutions, but also retained some of their ancient ones, many of which, like the creed of the Divine Origin of the royal dynasty, may appear fantastic to the rationalist, but have great pragmatic value in having united the Nation by one common and visible bond.

The adoption of Western civilisation by Japan *has not been merely a monkey-gland operation on the old body of a crumbling civilization, as in India or China,* producing a show of temporary virility, and leading ultimately to general weakness and dissolution. It has acted, on the other hand, like a powerful tonic and transformed a Nation, which was then in its early spring, to unprecedented effort and well-merited success. For unlike the political pundits of India and China, the Japanese did not cry merely for the legislative and administrative machinery of Europe, but adopted her industrial and creative machinery even from 1868, the beginning of the Meiji Era. India, as well as China, burdened with her great past, looks back with longing, lingering eyes to the vanished village economy, to the cult of the spinning-wheel, and the bullock-cart, and primitive Agriculture and primitive Industry as the panaceas for all her ills. Japan did not commit that mistake but threw herself, with all her youthful energy, into developing her natural resources in minerals and power, overhauling her industrial machinery, and organising an efficient system of national education. To-day with her internal resources alone, she can manufacture all the essential chemicals, textiles, artificial and natural silk and paper for export, everything required for the transport industry (railways, shipping materials, ships, radio goods, telegraphic and telephonic equipments, etc.,) all materials required for offence and defence, guns, rifles, munitions, automobiles,

tanks and aeroplanes. And she has done all this, without having to import foreign capitalists or foreign technicians, or without having to plunge into a bloody civil wár.[2] Interested and envious foreign observers lay the charge at her door that she sweats her labour and is indifferent to the welfare of her peasants. But impartial observers have found this charge to be baseless or highly exaggerated; even at her worst, she cannot be said to sweat her labouring class more than some western countries, which swear by the name of democracy, sweat their own labour, and force unwilling colonials to toil and labour by the imposition of the "hut tax," or by smoking poor savages out of caves.

MENACE OF JAPAN TO INDIA

The very strength of Japan, roughly outlined above, however, is a source of great danger to India; for Italy and Germany are after all distant powers, and cannot possibly give undivided attention to India. But Japan has gradually and almost by imperceptible steps penetrated to our very doors. Further, every year, she gives birth to more millions than the U.S.A., or England, France and Germany combined. In thirty years, she will be a far more populous nation numerically than three first-class European nations or the United States of America. Where shall she find room for her unborn millions, for her present surplus millions, and whence shall she obtain the essential raw materials in which

[2] This point is particularly mentioned because several leaders in our country are of opinion that large-scale industrialisation in this country is impossible without foreign capital, foreign technicians and a bloody class war. They forget that Japan has achieved a better industrialisation then even Europe without foreign capital, without foreign technicians and without class war. What is wanted in this country is clear vision and the will to work.

her present empire is notoriously deficient, *viz.*, iron, cotton, oil, nickel, and wool? She has, therefore, nurtured the ambition of bringing the whole of Eastern Asia under her domination. Manchukuo, North China, South China, Indo-China, Burma, Dutch East Indies, Bengal and the rest of India,—these are the countries said to be marked out for successive aggression by the Japanese militarists. Her programme has, so far, gone according to the time-table. Within a year of the outbreak of the Chinese war, she has helped herself to the possession of Peiping, Canton, Nanking, Hankow, Shanghai, the whole of the Chinese sea coast the great river systems which form the arterial highways of internal trade, and most of the railways, and has succeeded in immobilising the international trade of Shanghai and Hongkong. The possession of the rich iron mines of Tayeh, reputed to be the richest in the world, has relieved her of the embarrassment of grave deficiency in the most essential metal, iron, without which no offence or defence is possible. The possession of the rich cotton fields of Northern China, which she had already started to develop by the inauguration of a Development Company will give her another essential material for which she was so long dependent on India and other foreign countries. The docile Chinese in the conquered territories appear to have accepted the Japanese yoke as the inexorable decree of Fate, and are indirectly helping them against their own countrymen, now fighting bravely a guerilla war under Chiang-Kai-Shek, in the roadless and trackless regions of Western China. However much we may sympathise with the brave Chinese, and this is only natural, the Lord of Hosts has always been found on the side of the strongest battalion; and as long as the Anglo-French Powers look helplessly on, being

immobilized by their complications elsewhere or from a lurking suspicion of the Soviet Bear, what hope is there of China beating back her invaders? It looks almost certain, however much we may regret the issue, that China is going to be reduced to the position of a milch-cow of Japan. But will Japan rest content with swallowing China, or reducing her to the status of her own exclusive milch-cow? No, India is also on Japan's programme of Asian conquest. After China, Burma, then Bengal, then the rest of India, as General Sir Ian Hamilton said sometime ago.

INDIA—THE PROVERBIAL KID

The attitude of aggressive nations towards India is illustrated by a story which was related to the present writer by the Poet, Rabindra Nath Tagore, in language of which he alone is capable: The kid approached the Creator, Grandfather Brahma. "Grandfather," said the kid, "I am tired of my life. Everybody is fond of my flesh; the lion, the tiger, the wolf, the hyena, and even inoffensive man! Please do something for me." The Creator looked at the kid and said "Well, I cannot blame the animals for having a liking for your flesh; it appears so inviting, that even *I* am tempted to have you for my dinner!" India's position is like that of the proverbial *kid*. Her huge market is a great attraction to the foreign manufacturer; her abundance of raw materials, undeveloped mineral resources attract uninvited foreign capital. Her ease-loving people rendered non-militant by pacific philosophy and the doctrine of the inexorability of Fate, easily allow themselves to be exploited. So even if India be not within the immediate political orb of Japan, Japan undoubtedly longs to capture our market and have our raw materials and our minerals

for removing her own deficiency. She may also like to invest her surplus for the noble objective of developing India's resources, as so many other "philanthrophic" nations have done in the past.

It is clear that if India does not want to be treated any more like "the proverbial kid," she must develop her fighting strength,—fighting not by physical methods alone but by spirit and action, and by developing her Industrial Machine to the fullest extent, and to the highest pitch of efficiency.

It is a common fallacy amongst ill-informed people that fighting can be successfully carried out only if a nation possesses a sufficient reserve of all fighting materials, rifles, guns, munitions, aeroplanes, etc., and a well-trained army. Experience has shown that in modern warfare the losses in each item during a first-class war are so great that the nation must also possess the means of immediately retrieving them. In aeroplanes, it is calculated that losses per month may amount even to 50 per cent of the total number in store. The same is probably true about other arms, but to a smaller extent. Hence any nation which is not completely industrialized can never hope to carry on a successful war. This is at the bottom of the grim tragedies of Abyssinia and China. They had the nuclei of good armies and had laid by good stores of arms and ammunition, but most of it, if not all, was imported. In Abyssinia the modern industrial machinery was almost totally absent, and China had just started "industrializing herself with grim earnest." The *débâcle* is due to the fact, that, either due to conflicting ideologies, or due to inertia, her leaders were unable to carry out the programme of complete and thorough industrialization, which her great leader, Sun-Yat-Sen, just

a year before his death, had placed at the forefront of his political programme.[3]

THE COMING STRUGGLE

Let us now visualize the position of India in the coming struggle, in which Italy, Germany and Japan may be ranged on one side, and Britain, France and U.S.A. and possibly Soviet Russia (though this is doubtful) on the other side,

[3] Sun Yat Sen was not only a politician but also a political philosopher. Starting life as "an agitator," and passing through thrilling successes and equally depressing disappointments, he, towards the end of his life, saw clearly that the Nation could not be emancipated by the capture of political power alone, but that this must be concommitant with social and industrial reform. In his lecture, delivered a year before his death, (San Min Chou, "*Three principles of the people*") he placed industrial reform at the forefront of his programme. This aimed at a thorough overhauling of the ancient industrial system of China, and replacing it by a thorough-going modern industrialism. Prior to this, whatever little industrialisation there was in China touched only the fringe of the vast country, and was mainly confined to the few sea-port cities. The so-called Chinese industrialists were merely trade-agents content to earn only middlemen's commission. There were practically no railways, no modern roads, and the vast mineral and agricultural resources of China were undeveloped. Sun Yet Sen's plans could not be immediately given effect to; for, after his death in 1923, China had to pass through the throes of a civil war. It was only from 1931 that the Central Chinese Government under Chiang-Kai-Shek began the work of industrial organisation in grim earnest, and attained remarkable success within a short time. But this alarmed Japan, which saw that an Industrial China would be able to hold herself against Japanese aggression. The task was also much delayed by internal reactionaries,—protagonists of the old system. If Sun Yat Sen's programme had been started from 1923, China would have beaten back the Japanese invasion.

India is now very much at the same stage as regards political thought as China was in 1923. The Congress President has outlined a scheme of industrialisation, but this has evoked hostility from two extreme ends, *viz.*, Imperialistic Capital and the orthodox section of the Congress Rightists.

with the smaller nations as shock-absorbers or strategical scapegoats on one side or the other. As Adarkar has shown, there is little likelihood that the Mediterranean route will remain open. The other sea-communications to India also will probably be very seriously interrupted. She will have to face Japanese aggression with her base in China (Canton is only 1600 miles by air from Calcutta, and modern bombers will not find it difficult to hop from Canton, drop bombs over Calcutta and fly back to their base in Canton in safety)—the Italians may accomplish the same feat from East Africa and bomb Bombay and Karachi. Probably these aeroplanes will confine their attention mostly to sea-going vessels, power-houses, petrol tanks, factories for the manufacture of arms and ammunitions, and generally, they will aim not so much to break the morale of the people (for the fighting morale has never been strong in India) but to interrupt vital communications, and throw out of gear such industrial machinery as exists in the country. At any rate, there is a great danger that with the virtual stoppage of marine communications, the position of India in regard to defence against outside aggression and possible internal riots will be rendered extremely precarious. India will have to fall back upon her own resources, and upon the meagre industrial machinery which already exists. But it is well-known that besides a few factories for the manufacture of guns, rifles and ammunition, India has to import almost everything else from outside. She manufactures no automobiles, no aeroplanes, no locomotives, no oil-engines, no electrical or optical machinery, no heavy chemicals,—all of which are indispensable for a really first-class defence. Her reserves of these materials will be all used up in the first few months of war, and then she will have to face the

aggression very much in the same way as Abyssinia had to, and not even as effectively as China has done in the present struggle.

The reader might well ask: but where is the enemy? This is, of course, a real vantage point with India. Her potential invaders are at some disadvantage; since, for the present, they are very far off, and without a land-attack for which neither Japan nor Italy is well-placed, the country cannot effectively be conquered. But how long will the present vantage condition persist? Western China up to the border of Burma may come under Japanese control, if the Powers do not intervene, and Japan may build railways and motor roads right up to the borders of Burma much earlier than we think, for the rich mines and oil wells of Burma must be within her objective, as an item in her programme of conquest. The Soviet Republic, now with a thoroughly industrialized Central Asia at its back, may make a diversion through Afghanistan to give a knock-out blow to the first capitalistic Power in the very heart of her Empire; and war-weary Britain, troubled with the defence of her own Island, and with the problem of food-supply of her millions, which has now become a far more embarrassing problem than it was ever before, may throw up her hand in despair and say "We can no longer defend you—we are going away; look to your own defence,"—just as the Emperor Honorius said to the peace-loving Romanised Christian Britons in 410 A.D., when Rome was menaced by Alaric, the Goth. And, if after that, some Japanese men-of-war sail up the Hughli, or Italian cruisers sail up Apollo Bunder, we shall have nothing else to do but present the unwelcome guests with an address of welcome, and ask them to be gracious enough to rule over India! And with that will begin another cycle of slavery

for India and a dark, unfathomable future for the generations still unborn.

The picture of the future which Prof. Adarkar has drawn is neither overcoloured, nor impossible. Any intelligent reader of the foreign news will have drawn the same conclusions from a reading of the political barometer. And if the threat of aeroplane bombardment of Calcutta and Bombay by Japan or Italy are mere fantasies, why are precautionary measures against air-raids being staged in the Calcutta Maidan almost every week? To these external dangers must be added the possibility of internal disturbance,—communal riots, agrarian troubles, class wars —all of which follow when the central power is weakened.

It will be a stroke of great statesmanship on the part of our rulers if they can overcome their present policy of distrust: if they can take Indians into confidence regarding defence measures about which they are clearly and unmistakably very nervous, for without whole-hearted Indian co-operation, and mobilisation, and the full development of India's Industrial Machinery, it is impossible for them under the changing tactics of modern warfare, to organise measures which would be effective against a possible Japanese, Italian, German or Soviet aggression or a combination of any of these. In one essential respect, India is very strongly entrenched: She has, excepting oil, tin, nickel and mercury, almost all the raw materials, necessary for the manufacture of the arms of defence, including materials required for the maintenance of communication. If the country works with one mind, a really effective defence organisation can be created, under Indian leadership and with whole-hearted British co-operation, in a not very long time.

NEED FOR CREATING THE RIGHT PSYCHOLOGY

There may be little chance that the change of heart looked for in our rulers will be forthcoming. But if the public be really convinced of the dangers ahead, as portrayed by Prof. Adarkar, and if they are convinced of the necessity of defending their hearths and homes against the foreign aggressor, and of the urgency of sparing their unborn generations the yoke of grabbing foreign powers, it is clear that the leaders must give up their present ostrich-like attitude,[4] and tackle the problem with all the seriousness it deserves, and *thus spare themselves the opprobium of future generations,* that, in spite of warning, they behaved in the typical way which led to past tragedies of Indian History.

At the present time, the Indian National Congress is the most powerful political party in the country. They have secured power in the majority of the provinces, and in others their influence is considerable. If the Federation comes, they will wield considerable influence in the centre which is all-important, if any scheme is to be given the necessary push. Further, the Indian National Congress possesses leaders of great driving power, capacity and of sterling integrity of character. Much, therefore, depends on the attitude taken up by the Congress towards these problems.

So far, the official bodies of the Indian National Congress have expressed no opinion on problems of defence. It is doubtful, whether, preoccupied as they are with internal problems of immediate importance, they have been able to give any thought at all to the problem of defence, or are

[4] The ostrich buries his head in the sand, and thinks that nobody can see him.

even aware of the existence of a "problem." On the other hand, on account of acceptance of office, the work of the leaders has so much increased that hippopotamus-like they have all the time to wallow in the mud of routine.

It is extremely important, therefore, that the Congress appoints an independent body of its own to examine the question of India's defence, in the light of the picture drawn by Adarkar.

SOUL FORCE *vs.* PHYSICAL FORCE

But it is also necessary to investigate the root cause of the intellectual paralysis of India's intelligentsia towards the urgent problem of *defence*. As Adarkar has very ably shown, the indifference is due to the widely held doctrine that for India, the technique of defence for Indians must be different and national, like what is said to have been practised by India for ages to preserve her social system intact. In brief, Indians should attempt to meet all foreign aggression by soul force, *i.e.*, they should try to melt the heart of the aggressor by practising *Satyagraha*. This remedy is particularly recommended on account of the futility of the recent resistance of Abyssinia, China, and Czechoslovakia against aggression. Adarkar says that this attitude is impracticable, Utopian and will lead to disaster.

The doctrine of non-violence, says Adarkar, may be somewhat effective in creating a spirit of *resistance* in an unarmed and medieval people against a police-governed State, and in producing a background of moral atmosphere against the medieval and feudal systems prevailing in India, such as landlordism, Princism, and foreign capitalism, owing to which a large majority are denied some elementary human rights, and this in order to satisfy the pleasure of a

few pampered individuals. But he says that the success which has so far fallen to the Congress is not due to the technique of *Satyagraha* as such, but to the wide-spread desire on the part of the people to regain their elementary rights. What prospects, however, does *Satyagraha* hold out for successful resistance against a ruthless foreign aggressor, like a Fascist Power, who does not disguise her intention of holding the less advanced nations in perpetual helotry or justify her actions on philosophical and humane grounds?

If the belief in the efficacy of soul force against the impending evil is really mistaken, as Adarkar holds, our first duty should be to combat it, for Faith is the mainspring of all action, and nothing paralyses human activity so much as a false or blind adherence to a " doctrine." Let us, therefore, examine the claims of soul force as a panacea against all man-made evils—foreign aggressions, and communal and class wars—which are all ascribed to the depraved mentality created by modern machinism. I share the opinion of Adarkar that *Satyagraha* backed by soul force, though it is a noble path for private conduct, cannot be adopted as a creed for discharging the duties of the State, and if in such matters as in the maintenance of Law and Order, or in organising the defence of the country, we allow our actions to be paralyzed by such doctrines, we shall be committing the greatest crime towards posterity.

The idea of using soul force in government has been adopted from the writings of Count Leo Tostoy who, out of sympathy with the downtrodden and poverty-stricken Moujiks of nineteenth-century Russia, dressed and lived like them, and extolled the virtues of simple village life and of non-resistance to evil. But according to keen critics like Masaryk, he remained at heart an aristocrat and troubled

his countrymen with schemes of social and industrial reconstruction which were marked by impracticability and which fell through, after a few experiments.[5] Taken at its best, the doctrine of non-violence which is summed up in the saying ascribed to Jesus, " If anybody smites thee on the right cheek, offer him thy left cheek also," is an appeal to individual human nature. We see its limitations clearly if we examine the origins of Christianity. This religion arose in a country of farmers, fishermen and small artisans (Jesus was himself a carpenter by birth, and his followers were humble folk like fishermen, publicans etc.), who were reduced by the exactions of Roman Imperialism to the extreme depths of misery and want. To such a community deprived of the barest amenities of the world in this life, the appeal of a Kingdom of Heaven in after life would be strong, and if they were smitten on the right cheek, there was nothing left to them but to offer the left cheek as well. But such conduct produced not the least change in the affairs of the state. Christianity spread, not so much owing to the ethical value of its tenets, which, as Breasted has shown in his *Dawn of Conscience* are found in the old Egyptian and Babylonian scriptures antedating Christ by at least two thousand years, but owing to the fact that the genius of Paul endowed it with a catching theology, an explanation of the origin of Sin, and a clever incorporation of the essentials of pagan beliefs and institutions, and above all to the fact that the settled government created by Roman genius enabled

[5] Some very funny incidents of Tolstoy's life may be mentioned. He did not believe in railways, and thought he had proved it by tramping from St. Petersburg to Moscow on foot. He did not believe in doctors, but his private secretary was a doctor. He did not believe in money, but Countess Tolstoy kept the purse for him.

a good deal of easy and safe intercourse in the ancient world, enabling the preachers of Christianity to reach suffering humanity in all parts of its far-flung empire. When three centuries later, during the reign of Constantine the Great (323 A.D.), Christianity was called upon to assume the responsibilities of the state, it had to adopt the full administrative machinery of the Roman Empire. The Christian, whether in public or private life, instead of offering the left cheek when struck on the right, began to batter the striker on both cheeks! The substitution of Jupiter Optimus Maximus by Jesus Christ produced no change either in the policy or the machinery of the State and no Christian ruler was more humane in his royal duties than the pagan Antoninus.

What would have Jesus and his Apostles done if they were called upon to shoulder the responsibilities of the Roman Emperor,—to maintain law and order, protect internal communications and defend the boundaries of the Empire against barbarian inroads, as another great Founder of Religion was called upon to do six centuries later? We have Jesus's recorded saying "Render unto Caesar that which is Caesar's," which shows that he approved of the use of the usual machinery of the state in the discharge of its legitimate functions, and his Sermons were an appeal to individual human nature, and not meant for the guidance of the State.

What Jesus and his apostles would have done if they were called upon to shoulder the responsibilities of the State is demonstrated by the history of the world during the last 1600 years. Since Constantine adopted Christianity as the State religion, innumerable kings, emperors, popes, and rulers of minor degree have been called upon to rule over

Christian populations in all the four continents of the world. If the doctrine of non-violence were applicable to government, at least one ruler would have been found who had ruled the State according to this principle. We would challenge the supporters of the theory to mention a single Christian ruler in history, who ever attempted to apply the creed of non-violence in government, and attained even a moderate amount of success. If even one example can be found, we shall waive our objections. If, on the other hand, not one example can be found, we have to accept that the experience of human history of the last sixteen hundred years is definitely against the applicability of the theory and we have to accept the opinion of Adarkar that the Congress, by neglecting the problems of defence and professing to be able to solve it by soul force, is asking us to "worship false gods."

The futility of a state trying to govern by Christian principles is writ large not only in history, but also in the curious conduct of certain persons, who are in private life good Christians, but are found to be forced to do very un-Christian acts when faced with embarrassing political or social situations. One example may be cited: In 1885, the prevalence of Fenianism amongst the Irish Homerulers made the lot of English officials at the Dublin Castle extremely uncomfortable. The English Government sent one Mr. Fox, who was a Quaker and known to be a model Christian in private life, as Chief Secretary to Ireland in the hope that he would be able to bring about tranquillity. The good Christian Fox, troubled by the daily demonstrations of the noisy Irish Homerulers and not knowing how to maintain law and order, hit upon a novel plan. He directed the police to disperse the crowd by means of buckshots.

These are used for killing small birds, and when used against man, inflict wounds, which are painful, but not deadly. But this compromise between Christianity and Government became so hateful that "Buckshot" Fox had to be recalled within six months.

Medieval history is full of examples when extreme forms of cruelty against rebels to Christian thought were clothed in euphemistic and apparently inoffensive language. The well-documented history of Europe offers no example of a Christian monarch performing the functions of Government by "non-violence," but our critics may quote some mythical Eastern figure in legend-rich India. Indian thought has however always upheld "violence" for a right cause. The *Geeta*, one of the most precious treasures of Indian thought, holds that the physical body is only the temporary, perishable abode of the imperishable soul, and in the execution of duty, one should not hesitate to kill his enemies, even if they happen to be one's near and dear relatives.[6]

[6] It may be apposite to quote a few lines from the *Bhagavadgita*, for the benefit of those who may be curious to know the exact message of that inspiring Song.

Shri Krishna had to preach the *Gita* to His disciple, Arjuna, who, on the battlefield of Kurukshetra, suddenly felt petrified at the prospect of having to kill his own brethren, for mere pelf. Krishna's principal aim was to reassure Arjuna that there was no evil in a righteous war and round this theme He wove the magnificent fabric of his manifold teachings. He first appealed to the family traditions of Arjuna, to his *Kshatriyatva* and to his valour. Said he:

धर्म्याद्धि युद्धाच्छ्रेयोऽन्यत् क्षत्रियस्य न विद्यते । (II-31)

"There is nothing more blissful for a Kshatriya than a righteous war."

Then Krishna urged that evil-doers must be annihilated. Violence for establishing Truth and Justice and destroying Evil,

BUDDHA AND NON-VIOLENCE

Perhaps for extolling the cult of non-violence, no great founder of religion is more misrepresented than Buddha. On many occasions, Mahatma Gandhi has urged the Chinese to meet Japanese aggression by non-violence, and on count-

i.e., Regulative Violence, has always been a feature of the Hindu religion, as the concept of Siva in the Hindu Trinity shows. That same aspect of the Natural Order is illustrated in:

परित्राणाय साधूनां विनाशाय च दुष्कृताम् ।
धर्मसंस्थापनार्थाय संभवामि युगे युगे ॥ (IV-8)

"For the protection of the good, for the destruction of the evil-doers, for the sake of firmly establishing Right, I am born from age to age."

This great purpose is achieved by the Holy Will through the agencies of particular persons, who are for the time being merely the instruments of destruction. Krishna says:

मयैवैते निहताः पूर्वमेव ।
निमित्तमात्रं भव सव्यसाचिन् ॥ (XI-33)

"I have already killed these warriors; thou, Oh Arjuna, now merely become the instrumental cause of their death."

This line of thought is continued in the aphorisms:

मया हतांस्त्वं जहि मा व्यथिष्ठाः ।
युध्यस्व जेताऽसि रणे सपत्नान् ॥ (XI-34)

"Kill those whom I have already slain; do not tarry; fight; thou shalt vanquish thine enemies."

यदहंकारमाश्रित्य न योत्स्य इति मन्यसे ।
मिथ्यैष व्यवसायस्ते प्रकृतिस्त्वां नियोक्ष्यति ॥ (XVIII-59)

"Entrenched in egoism, thou thinkest 'I will not fight'; to no purpose thy determination. Thy nature itself will constrain thee to fight."

Violence for self-defence is permitted by the following dictum of the *Manusmriti*:

आततायिनमायान्तं हन्यादेवाविचारयन् ॥

"If a desperado come to kill, one may kill him without demur."

less occasions, he has preached that *Ahimsa* should be practised even when one's hearth and home and country is in danger, and he has cited Buddha in defence of his arguments.

But let us see what Buddha himself thought about these matters.

The following conversation took place between Simha, a general of the great Lichchhavi Confederacy who had their capital at Vaisali, and Lord Buddha. The former, after having listened to Buddha's sermon about *Ahimsa* fell under the doubt that in choosing the profession of a soldier, he was following a sinful course. To get his doubts cleared he sought an interview with Buddha, and put the question straight to Him.

"The Tathagata (Buddha) having given his consent, Simha said: 'I am a soldier, O Blessed One, and am appointed by the king to enforce his laws and to wage his wars. Does the Tathagata who teaches kindness without end and compassion with all sufferers, permit the punishment of the criminal? And further, does the Tathagata declare that it is wrong to go to war for the protection of our homes, our wives, our children, and our property? Does the Tathagata teach the doctrine of a complete self-surrender, so that I should suffer the evildoer to do what he pleases and yield submissively to him who threatens to take by violence what is my own? Does the Tathagata maintain that all strife, including such warfare as is waged for a righteous cause, should be forbidden?'

"Buddha replied: 'The Tathagata says: He who deserves punishment must be punished, and he who is worthy of favour must be favoured. Yet at the same time He teaches to do no injury to any living being but to be full

of love and kindness. These injunctions are not contradictory, for whosoever must be punished for the crimes which he has committed, suffers his injury not through the ill-will of the judge but on account of his evil-doing. His own acts have brought upon him the injury that the executer of the law inflicts. When a magistrate punishes, let him not harbor hatred in his breast, yet a murderer, when put to death, should consider that this is the fruit of his own act. As soon as he will understand that, the punishment will purify his soul; he will no longer lament his fate but rejoice at it.'

"And the Blessed One continued: 'The Tathagata teaches that all warfare in which man tries to slay his brother is lamentable, but He does not teach that those who go to war, in a righteous cause, after having exhausted all means to preserve the peace are blameworthy. He must be blamed who is the cause of war.

"The Tathagata teaches a complete surrender of self, but he does not teach a surrender of anything to those powers that are evil, be they men or gods or the elements of nature. Struggle must be, for all life is a struggle of some kind. But he that struggles should look to it lest he struggleS in the interest of self against truth and righteousness."

This story shows that Buddha completely justified wars undertaken in self-defence, and for the punishment of the wicked. Further, many of his recorded actions illustrate that when faced with actual problems, he acted according to this principle. In pursuance of this policy, he refused to intervene when a punitive expedition was undertaken by Vidudhava, King of Kosala, against the Sakyas, his own clansmen, for an offence committed by the latter against the

house of Kosala. He allowed the Sakyas to suffer punishment, as they would not change their hearts. Much romance is made out of long perorations of King Asoka in his rock edicts, in which he proclaims that he got disgusted with wars, and proposed to rule his kingdom according to the rules of Dharma. Many people are inclined to believe that Asoka did not shed any blood after his conversion, and ruled his mighty empire without any soldiers. The Jainas, however, tell us another story. They preserve a tradition that in the city of Paundravardhana, a Jaina monk, in order to show the superiority of his religion over Buddhism, had a picture drawn in which Buddha was shown as making obeisance to Mahavira, his contemporary Apostle of Jainism. This was communicated to Asoka, and he was so enraged that he not only put the offending Jaina monk to death, but also ordered the demolition of all Jaina monasteries, and the deprivation of the Jainas of their civil rights. This shows that in spite of professions of peace, Asoka was as jealous in defending the prestige of the State as any other potentate, and his support of Buddhism as State religion was a matter of policy, in order to make the task of administration lighter. We further know that both Asoka and his successors must have kept the army in a state of extreme preparedness and efficiency, for fifty years after his death, when the Bactrian Greeks menaced Pataliputra and Saketa, the Mauryan General, Pushyamitra, not only beat them back, but compelled the intruders to confine their activities to the west of the Sutlej.

THE TRAGEDY OF NALANDA

Probably it is not only at this age, but also in the past, that Buddha has been misunderstood, and his doctrine of

Ahimsa must have been misapplied leading to many tragic incidents. Probably no incident illustrates this better than the destruction of Nālanda, which was a great university town in Bihar, accommodating more than 10,000 Buddhist monks and students from all parts of India, from the period 400 A.D. to 1200 A.D. Here the pious monks and their pupils lived happy lives, of study, of contemplation and of purity in accordance with the doctrines of Buddha, and must have practised *Ahimsa* in thought, deed and action, leaving the question of defence to the wicked ruling powers. About 1198 A.D., the North Indian ruling powers were overthrown by the Turkish invaders, and a few hundred Turkish horsemen appeared before the great University town, no doubt attracted by the prospects of loot. The inoffensive monks, though they numbered 10,000 were unfamiliar with defence and allowed themselves to be massacred wholesale like sheep. So complete was the carnage, that the plunderers, after they had completed their orgy of massacre, loot and bloodbath became curious to know what the place was. There was nobody left to tell them about it, but from the great abundance of books, they concluded that it must have been a College!

The moral of the tragedy is obvious. If the monks were a little familiar with defence, they could have easily defended themselves against the handful of their attackers, or found time to escape and organise defence. But as it was, like vegetables they allowed themselves to be cut up wholesale and with them perished for all times to come many records of Buddhist learning. This was the result of a misunderstanding of Buddha's views on "Ahimsa"—a mistaken view which is even now being preached.

HOW AN EFFECTIVE DEFENCE CAN BE ORGANISED

The world is now a powder-magazine which requires a spark to set it ablaze, and keen observers are of opinion that another world war, far more terrible, and more far-reaching in its consequences than the last is inevitable. The conflagration will leave few countries intact, least of all India, and those who are under the belief that after the conflagration has consumed the wicked powers, "*the meek shall be left to inherit the Earth*" will find themselves greatly mistaken. The past history of the world shows that after such catastropies the sceptre merely exchanges hands, and the meek simply exchange masters.

The Spanish War, tragic as it is, shows the power of resistance of a determined people even against the most terrible odds. The Republicans had no trained soldiers to start with, no leaders who knew much of modern warfare, and no suitable organisation for the manufacture of arms, ammunitions, aeroplanes, tanks and other military requisites. Yet, in the midst of such terrible handicaps, till recently they resisted the onslaughts of well-trained armies, led by professional military men equipped with modern equipments, and backed up by the two greatest militaristic powers of Europe. The wonder is not that the Republicans of Spain have not won, but that they have been resisting so long. The example shows that it is not impossible to organise an effective Defence even with the present materials. Let us see how this can be done.

The first necessity is to create the right *psychology*,— to rouse the masses to a sense of danger. The Indian leaders must be more vocal and the public representatives on the Legislatures should ask the Governments to disclose, as far as possible, what steps they have taken to meet the

danger, and agitate for inclusion of Indian leaders in all defence committees. Our information is that the defence measures are hopelessly inadequate, for the Government have taken no measures to manufacture essential defence materials (like aeroplanes, automobiles, locomotives, radio goods, etc.), in India and that as our country depends wholly on foreign supply, which is sure to be cut off, we will have to fight a losing battle for our freedom.

The second necessity for defence is a complete Industrialisation, as foreshadowed in the speech of the Congress President before the inaugural meeting of the National Planning Committee. This must be a "forced march," as the Congress President remarked. It is unfortunate that the scheme has not roused as much enthusiasm as it deserves and has been unfavourably commented upon by two extreme sections. First, the representatives of British Imperialistic Capital who foresee in the Plan a possible shrinkage of the market for British finished products in India. Ostrich-like they are insensible to the danger to India when in the case of an onslaught by Fascist Powers, their privileged market will be entirely wiped out. It is possible for the great British concerns to come to an understanding with Indian Capital and open factories in India in co-operation with them for the manufacture of machinery, and essential chemicals. The other party who look askance at the Plan is the orthodox section of Indian National Congress who are pledged to revive the ante-diluvian village economy. Their efforts will contribute nothing to Defence, nor solve the economic problems of poverty and unemployment.

A further urgent necessity is the training of officers for the army, pilots for the air force, and the liberal provision of arrangements for imparting military training. These

problems should be discussed by a special committee of the Indian National Congress with a view to the creation of a National Militia.

But the most urgent necessity is the creation of the right Psychology, which does not exist now. This must be achieved systematically. Intensive boy-scout movements should be instituted for school-children between the ages of ten and fifteen and it should be made compulsory. Students belonging to post-matriculate institutions should be formed into labour brigades. At least for a month in each year, they should take the spade in hand, and in organised bands, should be employed in making roads and canals, cutting jungles, draining the swamps and improving the lands, and, if arrangements can be made, to undergo some factory training also. While in labour camps, they should be given a certain amount of military training, and should be under military discipline. The institution of such labour brigades for the adolescent will be extremely beneficent both for the country and the younger generations; for nothing promotes more the sense of solidarity than comradeship in young age, when boys belonging to widely different stations, dress alike and mess together, and are made to go through the same exercises for a higher cause.

Science and scientific training will play a great part in all defence preparations. A National Council of Research ought to be set up, consisting of the most eminent scientists of the country. The object should be to give such aid to Industry as possible, to study the scientific aspects of the starting of new industries which are essential for defence, but do not now exist in India.

The well-known British author, H. G. Wells, sarcastically remarked, the other day, at Bombay, "The world

will like to know what the 400 millions of Indians want to have," hinting thereby that the Indians did not know their own minds. Let us, by our action and behaviour, make it known to the world that we want to be masters of our own Destiny, and that we wish to defend our hearths and homes, and to march abreast of other nations on the path of progress in Science, Culture and the Humanities.

CALCUTTA
25th January, 1939.

MEGHNAD SAHA

THE AUTHOR'S NOTE

Even while the book is going through the press, the kaleidoscope of international politics presents a rapid change of hues and forms. The Spanish War is steadily drawing to its close, while the Chinese "incident" lingers on leaving an exhausted China and a war-weary Japan still in the eastern arena. The Anglo-Italian Pact and the Tunisian adventure of Il Duce, on the one hand, and the diplomatic subjugation by Germany of the Balkan States including Czecho-Slovakia and Yugoslavia, on the other, have added immensely to the strength of the Rome-Berlin Axis. I have tried to bring the subject-matter of this book as up-to-date as possible, but no chronicler can keep pace with the present rapid march of events. However, the changing panorama leaves the fundamental thesis of the book entirely unaffected.

In writing this volume, I have received much valuable assistance from my friend, Professor K. R. R. Sastry of the Law Department of my University, who, besides helping me in the correction of proofs and placing at my disposal his conspicuous knowledge of international affairs, has very kindly permitted me to use some material from two of his recent articles published in the *Leader* and the *Modern Review*.

I am particularly indebted to Professor Meghnad Saha, F.R.S., for taking great pains (in spite of ill-health) in writing such a powerful and reasoned foreword to my book.

The Indian Press, Ltd., and their able Manager, Mr. H. K. Ghosh, deserve to be congratulated on undertaking to publish the book and on executing the work of printing with great despatch and efficiency.

B. P. A.

INTRODUCTION

In its sub-title, this work has been described as an Essay on India's Military Problems. An essay, according to Johnson's famous definition, is a loose sally of the mind; this book lays claim to being no more than that. It was started with great hesitation, continued amidst interruptions, and is offered to the public with much diffidence. In a work which was completed in some haste and without elaborate planning, structural imperfections must necessarily be found; it is also possible that there are digressions, inequalities in emphasis and other shortcomings in manner and matter, for which the indulgence of the reader must be sought. The writer hopes that this indulgence will more readily be forthcoming if he frankly admits that his credentials for venturing into the forbidden ground of India's defences, are unimpressive. He can lay no claim to any specialist knowledge of the technique of warfare or of the delicate nuances of the international political landscape other than what can be acquired from a study of history, economics and law, or what can be gathered from the press, a few well-informed periodicals, and some popular books on the subject. He cannot also profess any meticulous accuracy of detail, since owing to the very nature of the subject, things are at present in a continuous state of flux in international relations as well as in regard to the quantity and quality of armaments.

This book is filled with shocks and excitements; yet it was not designed to be sensational. The main purpose of this book has been to give to the Indian reader a broad idea of the international situation, the possibilities of war, the

chief alignments of groups among the probable participants, and, most important of all, the tremendous change that has been wrought in the balance of international politics by the fast-progressing technique of warfare. In doing this, as I have said, it has not been my intention to encroach upon the preserves of the soldier and the military expert but to visualise the general problems of planned defence from the special standpoint of India. In the last War, India was safely isolated from the theatres of war and her placid enjoyment of undiluted peace was only slightly marred by the stray appearance of a cruiser, the *Emden*. Then, Japan and Italy were allies; the British naval might could successfully bar the passage of the German navy through the Mediterranean; and both Britain and France were comparatively stronger than they are today as against Germany and Italy. Unfortunately for us, however, Britain's naval supremacy has been rendered out-of-date by the emergence of aerial warfare with its double technique of conquest and mass terrorisation, and today Britain is hard put to it to defend her hearths and homes against aerial attacks. The Navy, everywhere, has become a huge target for the bombers, while the menace of economic blockade has become a real one for Britain and France. Although Britain's supremacy has gone, she is still undoubtedly one of the biggest powers in the world. Still it is very doubtful if she will ever be able, in an international war, to spare any of her forces for the purpose of imperial defence; for an international war will require all her concentrated forces to save her from enemy attacks. In all probability, it will be impossible for British battleships to navigate the Mediterranean or to negotiate the Suez Canal (which will be effectively blocked) in the next war. Britain has hardly

any man-power to spare for us; while her air arm is already so weak that, far from our getting any aerial succour from her, it might even become necessary for us to despatch the R.A.F. squadrons stationed in India. No help can be expected from Australia, New Zealand or South Africa, as each one of these will be engaged in, or remain prepared for, defence. The responsibility of India's defence will fall upon the meagre, un-mechanised, and in some ways un-modernised Indian forces. While Britain will be prevented from rendering any effective assistance to India, her three enemies, Germany, Italy and Japan (particularly the last two) will be in a position to spread their tentacles into the Indian territories. Japan is solidly entrenched in South China and her further progress may now become rapid. Japan's alliance with Siam is well known, while it is also no secret today that Japan's war-lords have Burma and India as the final items on their military agenda. On the other side, Italy is within almost a stone's throw from Bombay and Karachi and the amount of garrisoning and aerial equipment, which has gone on during the last two years on the Eritrean side of the Red Sea, will not probably miss its mark. In the event of war, the bombing and terrorisation of the leading cities of India is almost a certainty. Whether India will be ultimately parcelled out by the three enemy nations, or swallowed wholesale by any one of them, or, retained as a part of the Empire, will depend upon the chances of war, which are not exactly "fifty-fifty," so far as Britain is concerned.

There is no doubt that in the matter of self-defence, India is in a very favourable strategic position, as compared to countries like China and Abyssinia. In the first place, it is important to remember that India is an integral part

of the British Empire and that India will be involved in a war *only if* Britain is also involved, that is to say, if it is an international war. Now, in an international war, the warring forces of Italy, Germany and Japan will not be available for concentrated attack on India in the same way as there was a concentrated attack on Abyssinia or China on which the entire forces of a war-economy were let loose. This considerably simplifies the immediate problem of India's defence and is, I think, also an answer to those who (like Mahatma Gandhi) despair of offering military resistance to an aggressive enemy, on the ground that such resistance in the case of China and Abyssinia was of no avail. In this connection, it may also be pointed out that it was not *violence* which failed Abyssinia or China, but inferior and unorganised violence which yielded to superior force.

Secondly, India's geographical position is also a great military asset and safeguard which India must capitalise and utilise. The possible assailants of India, *viz.*, Japan and Italy, have their main headquarters and their spheres of operation so far away from India that aerial bombing on a very large scale will have to precede any movements of troops across India's land and sea frontiers. If India so organises her defence as to foil air attacks, which are bound to be sporadic and opportunist in view of what has been said in the last paragraph, she can effectively checkmate her enemies by making occupation by sea or land impossible. Another very important geographical factor in favour of India is the enormous distances of her land and sea face and the dispersion of her population in the villages. This factor will always render an aerial offensive a very costly affair to the enemy and an insuper-

able task especially to an exhausted Japan or a belligerent Italy. The superiority of defensive warfare, in which the offensive is taken only when the enemy is exhausted in his offensive, will be helpful to India in this respect.

Thirdly, the change in the technique of war itself is a factor in India's favour. India need not spend millions in building huge and unwieldy battleships such as those in which an enormous investment has been necessitated in foreign countries by the earlier technique of war. Navies are a necessary equipment today to aggressive nations as a second line in the movement of troops to subjugated enemy territories; for countries whose policy is that of self-defence only, navies are a wasteful investment, for attacking navies can always be more successfully dealt with by means of the air arm. Thus, the fact that the centre of gravity has now shifted from sea to land and air has enormously lightened the task of India's self-defence. It may be taken for granted that the aeroplane, which is the weapon of strategic attrition, will be in the case of India purely a weapon of strategic destruction, terrorisation and conquest. India's defences will have, therefore, to be planned so as to strengthen the air arm. I should attach even less importance to the mechanisation of the Army, as trench and tank warfare is unlikely to be of decisive importance in the case of India in view of the enormous distances at which the enemy headquarters are located. A defensive war-economy will only require a simplified mechanisation of the Army to the extent that will be required to render occupation by enemy forces impossible.

The immediate future is full of possibilities and it is impossible to predict the exact lines on which the international struggle will ultimately develop. There is, on the

one hand, the new diplomacy adopted by Hitler of military blackmailing and bullying and of achieving territorial aims without any bloodshed. Hitler is likely to go down in history as one of the greatest diplomats that ever lived, for he has been able to change the map of Mittel-Europa and establish Germany's hegemony in it without much ado. On the other hand, this technique is not of any avail in the case of victims like Abyssinia and China which are politically so segregated that there is no question of any international ramifications to intervene in settling the issue of blackmail. Yet, as Requette points out,[1] " It is not necessary to show that war is possible, at a time when it is raging both in Europe and in Asia. There are certainly today, as formerly and as there always will be, states which are inclined to conquer that which *can be taken without running all too great risks* (Italics mine). It is in the delicate estimation of these risks that the danger lies . . . . Yet no country can reasonably consider the taking on of the whole world . . . . Those which find the place which the sun and competition have given them too small, have not *the economic strength necessary for a prolonged struggle* (Italics mine) and they lack the possibility of a quick victory . . . . As for the nations whose positions are secure and which, in consequence, are conservative, they will certainly not take the initiative in a war which would bring misfortunes. Their attitude too is entirely defensive . . . . The world has entered on an era of wars with limited objectives, undertaken with limited means, an era of camouflaged, undeclared wars, or as has been often said, wars which remain anonymous. The reason for this is that the nations

[1] Quoted by Stephen Possony in *Tomorrow's War*, pp. 130-1.

engaged, being determined not to open the fatal door which leads to universal disaster, in this way do not abandon their ambitions."

It will be from India's standpoint a tragedy if the British Empire collapses without giving Indians a chance to strengthen their national forces with a view to self-defence. To deny that such a thing might ever happen is to deny the obvious course of international war-politics; for Britain's far-flung Empire instead of being an asset in time of war has become a first-rate responsibility; and Britain will *not* be able to protect her possessions adequately. The hope of India lies in following the line of least resistance and effecting an alliance with Britain on an agreed basis. Those who are dreaming of taking the opportunity of launching a civil disobedience movement, on the principle that Britain's adversity is our opportunity, will be taking a leap in the dark. Non-violent non-co-operation may be quite a correct stratagem with an established and powerful government, which, again, is capable of observing ordinary human principles in dealing with such revolts; it may be quite permissible to fight our ding-dong battles of *satyagraha* with Britain while the "bracket" of British sovereignty protects us from external molestation. But remove this "bracket" of protective domination and you will see that India is exposed in all her naked and non-violent shame to an ambitious and blood-thirsty world. *Absit omen,* therefore, but if the protective bracket is removed, non-violent resistance will be of no avail against the superior force of our enemies, which they are bound to utilise ruthlessly and *à outrance.* The wiser course is to make common cause with Britain not to save Britain, for it does not lie within *our* power to save it, but to save ourselves.

It is one of the aims of this book to plead for a New Deal between India and Britain, by which what Mahatma Gandhi calls the " substance of independence " and what lawyers call " Dominion Status " will immediately be conferred on India and in return the latter will enter into a binding alliance with Britain. It is more a consciousness of economic injustice than of political inferiority that has rankled deep in the hearts of our countrymen and turned their milk of human kindness into a sour beverage.

Indians who have been to England find the average Englishman, especially of the lower classes, a likable fellow. He has no superiority complex and he dislikes as much the slick City sharks and the money-bags of his own country as the Indian himself does. He will probably have no serious objection to giving India a square deal, even as he acquiesced with some enthusiasm in Irish emancipation and in Egyptian independence. His love of personal freedom is strong; in fact, it is too strong for the comfort of the recruiting sergeants. Healthy democratic instincts and a sneaking desire for international fairplay are virtues which are probably found in large streaks in his composition. Once the oppressive influences of the Tory press plutocrats are mitigated, it is likely that a *modus vivendi* can be established between the people of India and the people of England to the mutual advantage of both.

It may well be asked, why England, which is now holding a large empire in tribute, should at all allow India her political freedom and an opportunity to arm herself, with the resultant danger of the vassal sundering for ever the binding ties of loyalty? Had not a renowned Indian hinted darkly in Paris that tentative overtures had been made to him from quarters *not necessarily British* for a

political understanding with India in the expectation that she would shake off her shackles in the not distant future? Should or should not Britain. therefore, loosen her grip on this over-grown infant of a nation? The answer to this question lies in the intriguing potentialities of the international situation today. Elsewhere in this volume an attempt has been made to sketch the ominous storm-clouds which are lowering above the British political horizon. England, which grew to greatness on the strength of her naval power, has now been made to realise that the day of the super-dreadnought is over, and that she has been for ever widowed of the power which enabled her once to beat Napoleon to his knees and to starve Germany into an ignominious surrender. Since the warships are as dead as Queen Anne, England has in a measure abdicated her hitherto dominant status in the Far East, and her hold on the Middle and Near East has also become somewhat insecure. She urgently needs an ally in Southern Asia, who would draw off the fire from Italy's heavy guns and leave England and France to settle their scores with Germany with an even chance of success. India is eminently fitted to supply this help in the shape of a powerful diversion. Further, she has a plethora of man-power on which England can draw without stint in case of need. In food-stuffs and in essential raw materials, India can meet all the demands of the two western democracies. On India's part, a free alliance with England will be an insurance of national liberty. India's safety lies in an alliance with England, the self-elected and voluble protagonist of democracy and liberty on this planet. *The converging interests of the two countries are obvious. Without a strong and sympathetic India, England will be*

fighting a losing battle in Asia. Lacking timely assistance and co-operation from powerful Britain, India will fall an early prey to gangster nations prowling in search of easy game.

Are conditions propitious for such an understanding between the two countries? The answer would have been an emphatic negative two decades ago. For two decades ago, a sort of Kiplingesque self-complacence, seasoned with a liberal flavouring of jingoism, pervaded the hearts of the British upper and middle classes, who, taking their cue from the columns of the *Times*, the *Daily Mail*, and the *Morning Post*, liked to pose as the elect of God, entrusted with the special mission of ruling over the greater part of the coloured races, for the latter's material benefit and spiritual salvation. Latterly, however, this pose had been found to have worn very thin and the comfortable feeling of self-assurance to have been rudely disturbed. Doubts and dissonant ideological controversies began to darken the fair political skies of British imperialists, who were worried with the crucial question, "Is everything well with this best of all possible worlds?" A querulous note of interrogation persisted in the wake of all arguments on this subject. If England but fulfilled a divinely appointed task in holding in duress the brown and the black, then how was it that there was so much discontent and so much exhibition of unaccountable intransigence? In the face of the new-found love for Ethiopian liberty and for Chinese independence, how could India be denied her birth-right? If the head-hunters of Manila, if the scalp-gatherers of Manitoba, if the bushmen of Australia and if the slushmen of New Zealand were all, on paper at least, entitled to the full stature of God-given liberty, then how could the Hindu,

with his time-less civilisation, his centuries-old culture, his deep philosophy, and his innate good sense, be kept in subjection? Even sun-dried bureaucrats found difficulty with their Adam's apple when they attempted to explain away, in the approved manner, Queen Victoria's proclamation. Perhaps they were assailed by an honest doubt whether democracy was the special prerogative of the unpigmented.

It is the belief of the author that there is in England today what may be called a psychological diathesis[2] towards a square deal for India. In our country too circumstances are favourable for a *rapprochement* between the two nations. The acerbities of political temper and the occasional

[2] In a recent speech, Mr. Hodson, the editor of the *Round Table*, had some very appropriate things to say about this question. He expressed his conviction that there was a rapid movement towards full democracy in India which would be able to take effective control of her foreign policy and defence. It was vital, he said, that educated Indian opinion should study these problems in a realistic and careful way. "India," he proceeded, "is the prize, the biggest prize, the biggest object of potential conquest for a hungry imperialist power so that her defence need is very great . . . And her ability is not commensurate with her need. Defence in these days is very much a matter of material capacity of finance. Mere man-power is almost useless. A balance between needs and abilities was struck in a certain way in the past . . . (I have considered the whole question of finance later on—Author.) . . . The new balance that is going to be struck will be more favourable to India. India is going to profit by the urgency of England's defence problem. Because England is determined to perfect her national defence, she will concede more than if times were peaceful and she had only to consider peace-time contingencies. The very urgency of the thing makes it necessary, whatever the fairness of it. But if Great Britain herself pays for the maintenance and the equipment of troops in India, the obverse of that will be that the troops under Britain's command will be sent outside, where they would nevertheless in essence be used to serve India's purpose. Whether that system would develop on the lines I have indicated depends on India herself; for she will very soon control her defence and foreign policy."

ebullitions of Anglo-phobia, which we witness, are largely on the surface and super-induced in an otherwise forgiving and generous people by the tactlessness and lack of *bonhomie* of officialdom. In point of fact, India heartily echoes the sentiments of Mahatma Gandhi, when he said that the substance of independence would satisfy him. India, if given her rightful place in the sun, will be the biggest democracy in the world. Even today her electorate is nearly as large as that of France and England put together, or that of the U.S.A. With further extensions of the franchise, a hundred million people (a sixth of the enfranchised world) will have the vote in our country. India expects, therefore, that England, which was so solicitous about democracy in the Bohemian "hotch-potch," will do the proper thing by her own dependency. If, instead of looking at the writing in the Statute Book, England would only look at the writing on the wall, and if only British statesmen, instead of eyeing lovingly their own heavily signetted fingers, will gaze for a moment at another finger which writes and having writ moves on, there will be no hesitation on their part in launching India early on her way to freedom as an integral part of the British comity of nations. A noble word, a friendly gesture, a generous concession, will throw India into the arms of Britain, if only the latter would realise that hope deferred maketh the heart sick, and that a delicious gift, long delayed in the giving, turns into a Dead-Sea fruit.

Well has it been said that great empires and little minds go ill together. Luckily at present both in our country and in England, we have leaders of public thought in whom the qualities of restraint and realism in action, are coupled with intense courage and idealism in thought.

Mahatma Gandhi, Pandit Jawahar Lal Nehru and Babu Subhas Chandra Bose on this side and Mr. Neville Chamberlain, Lords Halifax and Linlithgow on the other, are men of practical sagacity, straightforwardness, and accommodation. What is standing between the two groups of leaders is the evil spirit of economic Imperialism which requires to be exorcised through the kindly ministrations of goodwill and far-sighted statesmanship. There are many who believe that proud Brittania has already conceived the idea of a free and voluntary Indian alliance in the defence of common interests and of democratic freedom. Friends of India and Britain (among whom the author counts himself as one) can do no better than hope for an early and successful *accouchement* of this great and glorious concept. If only England, like Goldsmith's heroine, would stoop a little to conquer, she will have not one, but three hundred and eighty million hearts, at her feet.

It may be apposite to make a reference in this connection to the ethics of defensive militarism which is advocated in this publication. Mahatma Gandhi has woven, out of his personal conviction and the needs of a disarmed nation, a garment of passive resistance with which he has clothed our domestic politics for some time. The magnetism of his personality and his high purpose and selfless devotion have carried such a tremendous appeal with both the intelligentsia and the unlettered masses, that his doctrine of pacifism has remained largely unquestioned. The details of this Gandhian philosophy are too well-known to need any elaborate statement.

Its keynote is *ahimsa*, which, in effect, implies, that if a fellow strikes you without provocation on your right cheek, you invitingly show him your left so that the

offender may realise his stupidity and be shamed into apologetic contrition. In theory, this doctrine looks good, for you defeat the aggressor not by the evanescent means of superior force, but by the lasting effects of a moral conversion. But when we, as a nation, start living up to this doctrine, when we commence translating it into practice *on a mass scale,* we notice its essentially Utopian character. In a world, in which international justice has suffered a permanent eclipse, and the accepted standards of inter-state morality are frequently honoured more in the breach than in the observance, the principle of *ahimsa* has no place. We have only to put our ears to the ground to catch the foot-falls of departing Astrea, the goddess of peace, leaving this warring world in a fit of disgust. Everywhere we see peoples arming themselves to the *n*-th degree of perfection; we see them in their sleek thousands marching to see battleships launched, to cheer and huzzah reviews and parades, to watch their aeroplanes stunt in the sky. We hear of fat, well-fed merchants of death, furtively going about their dark errands, bribing their way into chancelleries and parliaments and strangling with the weight of their gold the puny promptings of peace. Benevolent clergymen, staid University dons, doctors, lawyers, many a soft-collared professional gentleman, are shareholders in the firms which specialise in making engines of destruction. Among political rulers, the ruling vogue seems to be a sort of smash-and-grab technique which takes scant notice of international rights and treaties. Even the pretence of political necessity, or of the urge to civilise, to elevate and to teach (*a la Anglaise*) has now been given up by nations who are not ashamed to flaunt the law of the jungle as the fundamental article of their creed.

The downfall of idealism and fairplay is nowhere more in evidence than in the chequered history of the League of Nations. This institution was the brain-child of an American, whose split personality combined a curious mixture of vanity and theatricalism, with a formless aspiration towards a higher plane of international existence. At home, Wilson was felt to be a daring busybody, pledging his country's credit on a foolish European speculation; abroad, he impressed everyone as a profoundly insincere visionary, whose self-love made him an easy victim to the cunning flattery and the diplomatic legerdemain of Clemenceau, Lloyd George and Co. Wilson had neither boldness nor imagination and he had the common politician's way of regarding great propositions as only means to small ends. The League which he ushered into being was, as a result, a freak and a pigmy. It became a league not to end the conflict of sovereignties but to preserve it; not to restore international equality and square dealing, but to abrogate them for ever. It wedded itself to the absurd boundaries it created and to the amiable arrangement of making Germany a debtor to the tune of £40,000 millions, a sum more than equal to the national debt of all the world put together. Its decrees intended that Germany was not to make a settlement but to take a punishment. *Delenda est Germania* was the burden of a French political rhyme which the League adopted and sang with infantile vigour. With the passage of time Nemesis came and the prestige of the League sank. With four of the world's biggest powers staying out of it, it ceased to count for much in world politics. An attenuated secretariat and an impoverished budget reduced it gradually to the status of a social information bureau. The Ethiopian and the Manchurian incidents

and the Gran-chaco imbroglio threw into vivid relief the hollowness of its pretensions, as the arbiter of inter-state disputes. This world assembly of representatives, who would guarantee liberty, equality, and fraternity among nations, proved in the end to be but a costly and diverting toy. The consequence of this disappointing record of the League has been a revival of power politics, of international bickerings and of the race for competitive armaments.

It is in this setting that we have now to view the doctrine of non-violence so dear to the hearts of some of our revered leaders. As has already been said, as an ideal and as the absolute standard of personal conduct, the doctrine is unimpeachable. But the stern realities of world politics make it a positively unsafe and uncertain guide, when we are face to face with the problems *either of internal or of external state-hood.* An ideal, as Professor Webster has observed, may do more harm than good if it is dissociated from definite and attainable objectives. Good-will divorced from action is little more than an emotional luxury. Internally, the State cannot do without *organised* violence which is concentrated in the police and the security forces. Externally, the State must depend on its defence organisation to safeguard its interests and the safety of its subjects. Only a world without wars may do without an army, even as only a state without crimes can dispense with its myrmidons of the law. Human nature is a fallen nature and hence it is futile to expect absolute virtue or absolute peace among the nations of the world. When an aggressor invades a country, he cannot be turned back by a discharge of verbal bullets or by a fusillade of supplicatory phrases. Suppose, for example, that an Italian army penetrates into Gujerat and carries fire and sword through

that fair land. Are the people of that region, who at present are notable mainly for their well-filled cheeks and prominent waistlines, to rest content with fighting the conqueror with a barrage of sweet aphorisms, culled from the *Puranas*, the *Upanishads*, the *Dhammapada* and the later teachings of Vaishnava saints? Let us remember that that nation alone can be pacific which has the strength of a well-equipped army behind it. *For weak nations to practise non-resistance is not only to invite disparagement and contumely but positive aggression also.*[3]

There is no religion in the world which has elevated undiluted non-resistance to the position of a rule of state, however much it may advocate it as a fundamental tenet of private conduct or of any spiritual creed. Hinduism always considered it to be *Kshattriya Dharma* to dispel aggression by force, to put down rebellion by a judicious exercise of physical compulsion. Sri Rama spent the greater part of his recorded life in using violence against various types of evil-doers. The *Bhagvad Gita* is a clarion-call to a recourse to arms, to annihilate *Adharma,* and to establish the reign of equity and good conduct. Manu, the law-giver, fully approved of defensive force and would even allow a Brahmin to kill a cow which threatened to disembowel him. In Buddhism we find no explicit injunctions against defensive military institutions. Even Asoka, who gave up war as an instrument of national policy after the Kalinga episode, refers to generals and armies in his

[3] H. G. Wells declared in an interview recently that "Non-violence is the policy of the vegetable kingdom and I cannot agree that it is a panacea for the world's present troubles." "Animals" he said "tramp on vegetables and many eat them, and it is my opinion that in our present order of existence there must be some reasonable use of force, even if only as a balancing factor."

"Sermons on Stones." His father Bindusara, was a famous fighter as was also Sri Harsha, whose devotion to the cult of the Sakya Muni resounds in the pages of Huen Tsang. Jainism, which enjoins on its devotees the rigid sanctity of all animal life, has not prevented the kings of this persuasion from resorting to the *ultima ratio* on all occasions. The Testaments of Christianity—Old and New—are full of the bustle and din of marching armies, the clang of shield and sabre, and the dust and clamour of rolling chariots. And last of all, Islam (the religion of peace!) has seen more wars than probably any other faith in the world. Curiously enough, as the annals of religious history show, bitter contests have been waged, not merely in the secular interests of man, but in the very defence or propagation of religion itself, as would be seen from the Holy Wars or Crusades, which took toll of countless men in the past.

Idealists in action should prefer achievements to programmes. Even as in the economic sphere perfect free trade is a chimerical dream, in the *political* field, the quest for total *ahimsa* will be but the Sangreal of an endless pilgrimage. Let us remember what happened in the past and what is taking place in the present, when brutal and excited soldiery are let loose on a defenceless population. The Armenian massacres have gone into history, thanks to Gladstone's noble eloquence, as a classic example of stupid brutality. The Turkish capture of Smyrna and the Japanese occupation of Nanking have been signals to such orgies of lust and licence that imagination boggles before their cold reality. Those who would subscribe to the theory of disarming for peace and of antidoting political brigandage by gentle non-resistance, may as well believe in

the music of the spheres. A *satyagrahi* who will greet an excited and lustful invader on bended knees, with folded arms and mouthing his pet dogmas, will be voted a ghastly failure in this world, whatever his recompense may be in the other.

It is refreshing, however, to note that the Gandhian ideas have not obtained unquestioned sway over the thinking public as a whole. We are beginning to hear occasional notes of dissent, sometimes even from the inner circles of the Congress. The press and the legislature are also sceptical of this philosophy of international suicide and recently trenchant demands have been put forward for an early transference of military power into Indian hands and for the *augmentation of this power to suit the altered demands of the world situation.* It is to be fervently hoped that this propitious moment will be taken advantage of by the leaders of public opinion before it is too late. There is a tide in the affairs of nations, as of individuals, which taken at the flood, leads on to fortune; neglected, all the voyages of their lives are bound in shallows and miseries. More than ever before our country today needs political chiefs who will not be deafened into silence by *satyagrahic* preaching, but will prick their ears to catch the ominous undertones abroad, which indicate unmistakably the grave peril confronting our national safety.

Thanks to the Czech crisis, the dormant urge for national defence was suddenly quickened into activity and even Pandit Nehru was willing to offer military aid to Britain, provided, of course, a satisfactory constitutional compromise was reached in India. That the Pandit was but the mouthpiece of a growing volume of nationalist opinion, which would break the spell of the Gandhian

philosophy of pacifism is now widely recognised and the author hopes that this opinion will soon get crystallised into definite and well-planned action. To expect the rank and file of our countrymen to subscribe whole-heartedly to the major tenets of the doctrine of non-violence is to stretch the belief in human nature beyond the limits of perfect recovery. For example, Mahatma Gandhi stipulates that the perfect *satyagrahis* should "be prepared to lose all, not merely their personal liberty, not merely their possessions, land, cash, etc., but also the liberty and possessions of their families; and they must be ready to face cheerfully bullets, bayonets or even slow death by torture." Mahatmaji omits to mention the honour and chastity of the women folk but it is obviously implied in the loss of liberty. In fact, our great leader expects the humble *satyagrahi* to be a compendium of all the virtues, a veritable latter-day saint, and a sort of heroic cross between Christ and Buddha with a dash of Confucius thrown in! It is true that history has produced occasionally such men and women; as *e.g.*, the names of Tulsidas, Tukaram, Guru Gobind Singh, St. Joan, and Savanarola recall to mind, but their very rarity makes their example misleading. In many scores of years, our country has produced only one Gandhi. It is too much to expect, that even the dire peril confronting our motherland, will succeed in calling into being many more of his type out of the teeming millions who inhabit our soil. *Satyagraha* is a noble concept but without an army of inspired *satyagrahis*, it will remain but an empty if not a dangerous dream.

It is often said that against the British, *satyagraha* nearly succeeded. The expression "nearly" shows that, after all, it did not succeed. What *did* succeed was the

time-spirit, the universal democratic urge and the world-wide vogue for national self-determination. The Philippinos, the Burmese, and the men of Ceylon did not practise *satyagraha* but they yet got as much freedom as has been vouchsafed to us. Further even assuming that non-violent resistance did succeed in India, one can point out to violent resistance succeeding elsewhere, thus making the score even between the two concepts. The South American colonies, Ireland, Iraq, and Chinese Turkistan never had even a bowing acquaintance with "soul force" but they appear to have achieved their objective (*viz.*, national self-expression) well enough. The success of Indian nationalism has been due as much to the good sense of Britain and the spirit of the age, as to the efficacy of political agitation. It was *agitation* rather than the principle of non-violence which secured for us a further instalment of reforms. True, Gandhiji does not claim for his doctrines the merit of historical parallels. On the contrary, he feels that his theory is unique and untested. Viewed in this light, his suggestions lose much of their force and point for those to whom the extreme urgency of the national position is too much a matter of grave concern to permit of speculative experimentation with human nature.

Reference has been made to the vital influence of the international situation on India's immediate political future. To sketch the outlines of world politics, as they impinge on India's own, may be a profitable task. Their most noteworthy feature is the conflict of ideologies, the ever-growing tension between socialism and fascism. This conflict has been aptly called the "war of arms," as the clash is between the clenched fist (the proletarian salute) and the upraised palm (the Nazi substitute for the

handshake). But there are complications, since the socialist camp is leavened with a totalitarian admixture, and the fascist group is studded with democratic growths. On one side we find the western democracies flirting with absolutist governments like those of Portugal, Roumania, Turkey, Greece and Yugoslavia; on the other, we notice among the fascintern group, Japan the country which has one of the biggest representative administrations in the world. The opposing groups are, therefore, a curious medley of socialism and capitalism, of autocracy and elective rule. These somewhat incongruous and unstable alignments make it difficult to assort and to classify the contending factions. The certainties in the race for war are Great Britain, France, Russia, Germany, Italy and Japan, Nationalist Spain and Albania. The probable runners are Poland, Portugal, the Balkan *entente* (Greece, Bulgaria, Roumania, Turkey and Yugoslavia) the members of the British Commonwealth, and the Arab states. It is not a great problem to split up the first group but the second one defies such easy labelling for it is hard to assess the loyalties and to mark the affiliations of some of these dictator-ridden countries, whose politics are as changeable as the colour of the chameleon.

Such is the position in Europe today. What about the other hemisphere? Here the United States is, of course, the most influential factor in the situation. Whether America will participate in a future war is an open question. Before the rise of Italy and Germany, there was a strong revulsion of feeling against the entry into the last great war. The 'welshing' of foreign debts by her influential ex-allies, created an unfavourable sentiment, which was accentuated by the squabbles among the victors over the division of spoils and by the wholesale fashion in which the

high-sounding doctrines of democracy and self-determination, propagated during the war, were subordinated to selfish national interests. The League of Nations was denounced by most of the American press as a cunning imposture which would require America to pull the English and French chestnuts out of the fire. This anti-war sentiment had its sequel in the slowing-down of military expenditure and in the renunciation of colonial policy in the Far East. Later on, a Neutrality Act was enacted with a view to tying down the hands of the President and to prevent the country from being stampeded into a war by mere executive decision as was alleged to be the case in 1917.

Recently however the rise of Hitler and the forward policy of imperial Japan, have not been without their reaction on American public opinion. The failure of the Washington naval agreement has particularly alarmed the politicians and the big navy men, who have been able to commit the Treasury to a tremendous scale of armament expenditure. The Sudeten triumph of Germany has stimulated war preparations in America, as was evidenced by the recent speech of President Roosevelt who declared that a thorough examination of the quality of American weapons was necessary, in view of the unexpected weakness revealed by the democratic nations. The eclipse of the Republican party has worked towards military activity and a willingness to consider possible alliances and interventions in foreign affairs. The Semetic influences which are strong in America have resulted in some of Roosevelt's closest advisers being Jewish. The President's known antagonism to big business, and his proneness to radical labour legislation, have put him out of sympathy with the fascist powers.

England, France and, to a smaller extent, Russia have not been slow to take advantage of this coolness between Roosevelt and the Rome-Berlin-Tokio axis. A hectic propaganda is being carried on to coax the United States into an active *entente* through a dual appeal to America's self-interest and her sentimental democratic fervour. These efforts have so far miscarried because of the deep underlying pacifism of the mass of the people and a thorough distrust of smart European propaganda. The Republicans especially are opposed to foreign entanglements, as was indicated recently by ex-president Hoover, who, on his return from an eastern tour, published his opinion that an attempt should be made by his country to establish a *rapprochement* not only with the democratic countries, but also with the authoritarian states. The recent propaganda of Churchill in the States has not been a roaring success. The famous publicist Randolph Hearst (the Northcliffe of America) has roundly chided this propagandist from England in a radio broadcast and stated that U.S.A. should have no deal with "communist" France and "imperialist" Britain, but should be prepared to stand on its own legs and rely on its own armed strength. To prevent a "snap" decision, a bill has been introduced in the Congress to make a referendum compulsory before participation in a war and there is talk of the Neutrality Act being tightened up. During the Chinese war, when the *Panay* incident raised passions to a white heat, the leading peace-organisations of America submitted a memorial to the Congress in which it was pointed out that a war with Japan would cost a minimum of 5000 million dollars, which figure would be equal to the American profit from the Chinese trade for 200 years to come. The Sudeten crisis again brought forth

strong comments but no offer of assistance to the hard-pressed democracy in Europe. Even Senator Borah, a severe critic of Fascism, could promise nothing more than pious good wishes. When Bullitt, the ambassador to Paris, made an indiscreet Franco-phile speech he was promptly pulled up from Washington. Senator Borah went on record emphatically against any American intervention in European affairs, however much one might sympathise with a particular side. It must be admitted, however, that the conflicting forces of non-intervention and of a forward military policy are evenly balanced in U.S.A. and events occurring at a psychological moment, may effectively sway public opinion to one side or the other. It may be remembered that Wilson, who was re-elected in 1916 because "he kept U.S. out of the war," declared hostilities against Germany within two days of his re-installation. The position is different today on account of the Neutrality Act, the unhappy experiences of the last war and the vacillations of European democracy.

On the other hand, most Republican and industrial circles foresee that America will give a wide berth to any European imbroglio. They point out that the United States has no colonial problem now that the Philippinos have been practically cut adrift. American trade is more intra-national than international and there is as a consequence no economic incentive to war. They consider that the menace of Japan has been exaggerated by interested foreigners who ignore the fact that the American seaboard is three thousand miles away from Japan and that the latter has no political, military or economic reasons to violate the American soil. When it is remembered that there are strong Italian and German elements in the American

population which are likely to act as a curb on the interventionists, there is less assurance about Uncle Sam rushing to the assistance of John Bull. It will, therefore, be safe to assume that Americans, as a people, are less inclined towards a European war than they were twenty years ago, when they contributed £3000 millions to the Allies' war chests and three million men to the Allied armies. In this uncertainty lies also India's opportunity, for England without America behind it is likely to bargain more readily for our co-operation and assistance, than otherwise.

Viewed in the light of the above facts, it would appear that Germany today is in a stronger position than she was in 1914. Instead of two weak allies, she has two powerful ones. The rise of the air power and the great improvements in defensive warfare have shifted the military centre of gravity from the sea to the land and the air. Economically, it is claimed, she is more independent of outside supplies than she was ever before. Recently, Hitler's Labour Chief, Dr. Ley orated on the strategic preparedness and foresight of the Fuhrer. Hitler himself, in his opening speech at Nuremberg (on the 6th September 1938) thundered, in his characteristic gutteral style, on the folly of the "demo-plutocracies" deluding themselves with the hope of subduing the Fatherland by means of an economic blockade. The attempts at military autarchy in the Fuhrer's country are reported to have been generally successful. The German military genius, thanks to the progress in the cultivation of applied sciences, is now something which should cause serious concern to Germany's opponents. The Hindenburg and Siegfried walls in her eastern and southern frontiers consisting of lines of barbed-wire entanglements, sub-terranean passages, ammunition dumps and efficient

artillery emplacements are considered to be impregnable. Her cannon have the reputation of being exceptionally good. We have only to recall to our minds the Big Berthas manufactured by the Krupps and used in the sudden thrust against Paris in March 1918. These guns were carried to within 70 miles of Paris and used in throwing about 300 half-ton shells into the very heart of the city. The Allies, in spite of their best efforts, were unable either to locate the guns or to find out the secret of their immense power, till 1925 when a little political pressure opened the safe-deposit boxes of Krupps. It is currently reported that the Essen manufacturers have even improved upon the original Big Berthas by providing them with interchangeable barrel linings and elevating apparatuses. The German capacity for taking infinite pains and for looking far ahead of their contemporaries is evidenced by their remarkable discovery of monazite sand as being a source of pure helium. This discovery was capitalised by the export of large quantities of monazite from our own country before the last War.

Signor Mussolini will go down in the world's history as one of the greatest figures of the twentieth century. With his foresight and phenomenal tenacity, he has succeeded in altering the political stature of his country beyond recognition within a few years. It is stated that he planned the Abyssinian invasion as early as 1929 when he founded an Ethiopian college in Rome. More virile and self-assertive than Hitler, he is also afflicted less by the morbid racialism of his friend. Modesty is not a conspicuous weakness of the Duce and his political sincerity is also somewhat suspect. But the force of his dynamic personality is recognised in all quarters. Beloved by his people, surrounded by a galaxy of high military talent and

commanding a strategic vantage-ground in South Europe, his rôle in the coming conflict is one not to be lightly regarded. He has probably arrived at a comprehensive military plan of joint action with Germany. That the Duce, like Alexander and Napoleon, has an eye on the East is indicated by some political ditties sung in the music-halls of Italy, whose import is stated to be somewhat as follows:—

"Little Hindu, save up your pence,
For our Duce will soon be o'er the fence;
British Tommy, prepare to hike and hitch,
Our Musso will soon cross the Egyptian ditch."

The Munich Agreement has immensely increased Signor Mussolini's prestige at home and abroad. The part which he will play in the momentous events of the next few years will be decisive. The Anglo-Italian Agreement, which has just come into being, is a feather in the Dictator's cap. He will now be able to raise loans in London and strengthen Italy's tottering finances. But all the sweet words of Chamberlain or his successive surrenders will not make the Duce swerve from his goal of making Italy the mistress of the Mediterranean.

Japan completes the triangle of forces opposing Britain's hitherto unquestioned international sway. Elsewhere an attempt has been made to paint the picture of Japan as she is today with all her dark spots and white patches. As this is being written, the Chinese "incident" is slowly drawing to its *finale*. The Jap armies, after converging on the doomed Wuhan cities, lying astride the Yang-Tse (from where the Chinese Government has moved to distant Chungking) have succeeded in executing a pincer movement with great success. It might be remembered that

the first troops to enter Hankow were from the north-west, *i.e.*, from the rear of the disorganised defenders of the cities. The persistence and rapidity, with which the attack on this city was prosecuted, are a tribute to the Japanese military efficiency and an eye-opener to western observers who had been predicting a bitter and prolonged duel for the control of the Yang-Tse.

Japan is also casting about for friends who would come to her rescue in her hour of peril. The Rome-Berlin-Tokio "axis" is the direct outcome of this need. Japan is, in addition, laying siege to Mussulman affection, as would appear from her Pan-Islamic Conference recently held in Turkey and the opening of a mosque at Tokio. It is even whispered that she offered the throne of Mongolia to the uncle of King Farouk and that she has made similar cautious approaches to Persia and to the Arab powers. Her influence in Latin America is on the ascendant. In the Far East, she has an ally in Siam. The conquest of North and South China will make Japan the mistress of a population of about 200 millions and of the largest coal-and iron-producing tract in the world. Japan primarily lacks five things: petrol, coal, iron, cotton and gold. The Tayeh iron-mines near Hankow contain 40 per cent of China's iron deposits and are among the world's biggest. Japan intends to increase their capacity from one million to five million tons per annum. Since the conquest of Hsuchow, Japan already controls the enormous coal resources of North China. Cotton she will now grow in plenty in China, and petrol and gold she will strive to obtain from Siberia, when her ambition of wresting North-Eastern Asia from the Reds bears fruit. If Japan succeeds in her ultimate objective of invading Burma, she might also find herself in

possession of the rich oil resources of that country; if this happens, Japan will constitute a grave menace to weaker nations in the East.

Sceptics may raise their brows and assert that the chances of England accepting a self-denying ordinance, like the one proposed here, are remote. They may point to the bayonet rule in Palestine, the suspension of democratic administration in Malta and in Newfoundland, to the careful avoidance of a political investigation in unhappy Jamaica and to the way in which the Colonial Secretary is playing a hide-and-seek game with the Ceylonese Mission. They may suggest that, instead of either strengthening the military forces of India or granting a liberal measure of political power, Britain will prefer to wait till the emergency actually arises that would involve her imperial possessions, thus leaving India to take care of herself. The author's reply to such sceptics is that the exigencies of the international situation make an *entente cordiale* between the Congress (or whatever body represents the people of India) and the British Government an inevitable necessity. It is a happy augury that among the leaders of British thought a new spirit of self-criticism and compromise is creeping "beneath the scales that fence their self-interest." In this welcome spirit lie India's hope and opportunity.

But if the British statesmen refuse to co-operate in making a settlement, which is likely to be mutually beneficial, and take up a *non-possumus* attitude and thus add insult to injury by giving the finishing touch to their century-old policy of emasculation and of dictated disarmament in India, by exposing a weak nation to the lurking dangers of international war-politics, by denying to us our elementary right to defend ourselves, our hearths and

homes, our wives and children, from our common enemies, it will be incumbent upon us to muster our forces as best as we can towards the end of self-defence. I am firmly of the opinion that the Congress and other Governments in the Provinces can, within the four corners of the Constitution, achieve a great deal. They can begin by giving up their suicidal sophistry of *ahimsa* in politics and then lay the foundations of a well-planned defence policy. It is not the aim of this book to present a ready-made plan of action, but the people's Governments in the Provinces can certainly unite and achieve substantial results. They can impart general physical training on a mass scale, build up larger police forces, give military instruction in special military academies as well as in the Universities, develop the basic industries (which provide the sinews of war), maintain militias (as a second line of defence after the regular forces of the Government of India), build aerodromes and maintain a fleet of commercial aeroplanes and man them with specially trained pilots from amongst our young men. *This will enable them at a time of national emergency to help Britain in defending her dependency; for Britain is likely to be our best ally dictated alike by the necessity of the situation as by the danger of handing over our destinies to the tender mercies of our predatory enemies whose intentions are too clear to be misinterpreted.*

If, on the other hand, we refuse to shoulder this great responsibility of national defence on modern lines and like self-complacent lotus-eaters lull ourselves to sleep with the lullabies of non-violence, one day we shall be violently shaken out of our self-imposed slumbers and rudely reminded of the fact that, in ignoring the dictates of reason and age-long wisdom, in losing touch with the realism of the

modern world politics, and in making experiments with Truth, we have been worshipping false gods and that we have permanently bartered away not only our freedom but even the future possibilities of freedom for the mere mirage of spiritual uplift and for the doubtful distinction of having proved to a wicked world a new methodology of settling international disputes. As Goethe says:—

> " Verachte nur Verstand und Wissenschaft
> dėr Menschen allerhochste Gaben—
> so hast dem Teufel diçh ergeben
> und musst zugrunde gehen."

(Be but contemptuous of reason and science, the highest gifts of man, and you have given yourself over to Satan and must perish.)

PART I

THE CHANGING TECHNIQUE OF WAR

CHAPTER I

THE TECHNIQUE OF AERIAL WARFARE

No nation can afford to have among its leaders political ostriches and this principle applies *a fortiori* to the weaker nationalities. A glance at the world situation will clearly reveal the dangerous potentialities therein as regards the future interests of India. It has been observed tritely that there is nothing more conducive to war than competitive armaments. Today the world is an armed camp with the principal nations vying with one another in the race for armaments. While, on the one hand, the " haves " among the nations are forced to build up their armed might so as to conserve their existing possessions, the " have-nots," on the other hand, are just as eager and willing to dispossess the " haves " of their acquisitions by threat of recourse to war. In spite of the Munich Agreement and the ancillary pacts between the European powers (which may, at any time, prove to be " mere scraps of paper "), it seems unlikely that Hitler will succeed in entirely un-writing the Treaty of Versailles and giving full effect to his *Mein Kampf* programme by means of the same " bloodless technique " which has marked his successes so far. On the question of colonies and mandates, the signatories of the recent pacts are bound to fall out sooner or later. In a possible international conflagration, India is like a fattened calf ready to be offered as a sacrifice to any nation which is strong enough to oust Great Britain from her control over this country. Her teeming populations, her great consuming capacity as a potential market for manufactures, her wealth

of raw materials and industrial backwardness, and her military emasculation make this country a tremendously attractive bait for empire-builders.

Recent tendencies in warfare have revealed that aerial strength will ultimately determine the fortunes of war. It has been proved in recent wars in Spain, Abyssinia and China, that a nation which is superior in the air command would largely succeed in overcoming its opponents. The aerial strength is one which can be built up without much difficulty. The traditions of aerial warfare are luckily not very old, with the result that even comparatively new or backward nations would be able to cope successfully with the problems of a defensive (if not offensive) war. Nor is aerial equipment such a costly affair as naval armament, for example. Aeroplanes are comparatively cheap to buy or to construct and still more cheap to man.

India is one of those countries where essentially the danger of aerial warfare exists and where defensive aerial measures can easily be undertaken. Fortunately for us, an attack by land of the modern type, implying the movement of troops, tanks and other heavy artillery, is out of the question because of the natural protection provided by the Hindukush and the Himalayas, and because of the enormous cost and the vulnerability of such an attack. On the other hand, a naval attack is highly probable in view of the fact that we have practically no navy nor any aerial bombers to prevent such an attack. This attack may originate either from the Eritrean side in the west, or *via* the Straits or Java in the east. For the Italians it is quite an easy proposition to navigate the Arabian Sea, especially if Britain's naval arm be successfully prevented from reaching India through the Suez Canal. The Japanese also, who may have already

laid plans of an effective bombardment of the Singapore naval base from the air and who are now able to locate a small workable fleet off the Javanese coast to the south of Burma, will be within a striking distance of Calcutta and Madras. However, if India's aerial strength is ever likely to be troublesome to the enemies, naval movements will have to *follow* an effective aerial attack rather than accompany it, for the battleships can be an easy prey to our bombers. Thus, for purely defensive purposes, a large Indian navy is not only a financial Juggernant of a load, but also an unnecessary and technically a vulnerable proposition.

In the air, India can offer successful resistance, if prompt measures are taken immediately to build up an air force and to train up the personnel necessary for that force. Comparative statistics of aerial strength are not easy to obtain being very jealously guarded by the War Offices, but it is elementary knowledge that all nations are concentrating on the building up of a large fleet of aeroplanes both for offensive and defensive purposes. The danger to India can come both from the east as well as from the west, from powers who are in a position to send out large aircraft carriers to be based upon one of our coastal ports. If India is to offer any resistance, she will have to lay out air bases both in the east and in the west, so as to be within striking distance of enemy locations. It is not outside the range of possibility that the enemy will send out a sufficiently large air fleet to bombard our cities, terrorise our civil population and effectively paralyse our army movements. A fleet of one or two thousand aeroplanes is not too high a figure to be imagined in this connection, and can be easily spared by our enemies. In the Spanish war, which is being waged on a comparatively minor scale, there are over 1,000

aeroplanes engaged on the Nationalist side. In the Chinese war, also large numbers of the Japanese planes, nearabout 800, are operating in China. It is stated that the Russians have an air base with 2,000 air planes in Vladivostock and that the Italians possess a slightly smaller concentration in Eritrea and Abyssinia.

In modern warfare, the use of the aeroplane is varied and extremely important. Apart from such ancillary purposes as reconnoitring, transport of troops and ammunition, and assistance in observation, the air arm has three principal uses. In the first place, it assists in actual combat by bombing and machine-gunning enemy troops, artillery positions and supports. In the Chinese war, it has been observed that this assistance vitally affected the issue in many an engagement. Secondly, the air arm is used in bombing and destroying the means of communication and transport, like bridges, roads, railway lines and stations. In a large and sprawling country like China, this sort of attack worked havoc on military arrangements. Newspaper correspondents have described, with all the vividness of personal knowledge, the effectiveness and horrible accuracy with which the Hankow-Peiping and the Hankow-Canton Railways were bombed by the Japanese aeroplanes. It is easy to imagine how helpless our own country would become if our means of communications were violently disrupted. The Hankow-Canton Railway was repeatedly bombed by the Japs from the air; the Chinese labour gangs, with infinite patience and indomitable courage, repeatedly repaired the lines after each attack, but the results were wholly unsatisfactory. It is doubtful if the labour gangs in India will evince the same amount of discipline or courage as the Chinese. While we have more road and rail mileage than

the Chinese, our communications are very much more exposed. Except for some rail bridges, these are left absolutely unprotected. Elementary military tactics should warn us that all our important arterial bridges (road and rail), our important railway stations and yards should be protected by anti-aircraft weapons, and, where necessary, by small air force detachments. It is obvious that any enemy attacking India from a far-off base and headquarters will have first to establish himself near a port and, after the preliminary work of terrorisation and aerial subjugation is over, land his troops, artillery and ammunition *via* such a location. This is essential to prevent large concentrations, prejudicial to the invaders. It is to be noted that this method has been employed with great success in China and will surely be employed here. The third main purpose of the air arm is to demoralise the civil population by violent attacks on open cities and other points of vulnerability. In theory, international law prohibits the bombardment of open towns. In practice, today, this form of attack is the most fashionable. Twelve years ago, the Italian General of Aviation, Douhet, indicated, in his *Mastery of the Air*, how the civilian population of an enemy country, their homes, shops, municipal services, etc., should become the main military objectives, so that war can be carried behind the enemy's lines and the *morale* of the people cracked. The lessons of General Douhet are well learnt at every military academy now. The Spanish, Abyssinian and Chinese wars bristle with instances of Douhet's theory in application although on a minor scale. These attacks have diverse objects. The principal one is to create confusion and strike terror in the mass of the civil population. After all, wars are sustained by a sort of mass psychology. The

morale of the non-combatants can often be rudely shattered by a ruthless policy of "frightfulness" in war. Nothing can be more awe-inspiring than wholesale and surprise attacks from the air on the unprotected populations of cities. The bombing can be so severe that a popular anti-war hysteria, highly embarrassing to the authorities, can be induced in influential sections of the public. Governments can be forced to fly from their headquarters to less central localities. Diplomatic contacts may be interfered with, and the reins of public control, which are so vital in war, may be forcibly slackened. It will be remembered that, in the Spanish war, the important city of Guernica was totally destroyed, thus breaking the spirit of the Basque miners. Barcelona was attacked in the same way. The Italian successes in the Ethiopian war were to no small extent due to the annihilation of the town of Harrar. The bombing of cities has other objectives also, *viz.*, to put out of commission the cities' water and electric supplies. Since in modern cities, all social utility services are concentrated in some degree, the danger of an attack on these services can be easily imagined.

As the bitterness of the strife increases, moreover, nations become desperate and their moral consciousness gets blunted. This happened in the last War, resulting in the use of the poison gas, explosive bullets and unstinted submarine warfare, and is bound to happen again. In a war, all possible means will be considered to be justified by the end, which is the collapse of the enemy's national security. The use of the incendiary bombs has already commenced. The world is not yet aware of the full nefarious possibilities of thermite bombs. It has been estimated that a 100-lb. thermite bomb can smash its way

through five stories of a concrete building and set fire to whatever comes in contact with it. Nothing can extinguish a thermite bomb; in fact, water makes it burn all the brighter. There is no evidence yet that poison gas has been extensively used on civil population in recent wars, though complaints have occasionally been made, but the danger can well be realised. In the next war, wholesale asphyxiation of helpless city residents is certain to be attempted. What measure of success will attend this attempt, future alone can tell. It is significant that all nations exposed to this form of attack are vigorously organising to meet it. Gas-masks for all civilians, gas-proof refuges, fire-fighting equipment and decontamination squads are being feverishly arranged. It is doubtful if all these measures will effectively neutralise the anticipated danger. The attackers are bound to take a terrible toll of life and cause incalculable damage to property. The present plight of such important cities like Shanghai, Nanking, Madrid and Barcelona tells an eloquent tale of the horrors of aerial bombardment, whose black picture has not been overpainted by writers like Wells in some of their prophetic romances. To the horrors of bombs will be added the plague of epidemic disease, when food and water supplies may be deliberately contaminated with bacteria.

A word here about the much-vaunted weapon of non-violent resistance. Those who are thinking in terms of a non-violent militia opposing the enemy troops are interpreting modern warfare in terms of the Mahabharatian or Ramayanic wars. Let philosophers and saints and such-like condemn modern war as much as they like; let non-violence reign supreme on earth; nay, let earth itself be the kingdom of heaven. But to an ordinary, rational, wide-

awake person, who is not prepared to shut his eyes to the realities of *macht* politics, the idea of a non-violent militia must remain incomprehensible. His imagination and reason both must boggle at the prospect of a non-violent militia, "one crore strong," giving resistance to aerial bombers raining destruction and death everywhere. One wishes that Mahatma Gandhi or his followers worked out a concrete scheme by which their militia can come to grips with the enemy forces. One wishes they had a sufficient knowledge of human nature to realise that it is one thing for the *satyagrahis* to be subjected to a lathi charge and to be put into prison with their bodies and souls whole and more or less intact, and quite another for them to be blown to smithereens by heavy artillery or riddled with machine-gun bullets. Precisely how many followers can Mahatma Gandhi boast of who would unflinchingly give their lives in this wasteful fashion? Leave aside one crore; even one lakh, nay, even one thousand may be an overestimate; and Mahatma Gandhi realises as much, as his frequent despondent denunciations amply demonstrate. And it is precisely the above method which will be adopted by a ruthless enemy, like Italy, or Japan, and if we rely upon the essentially *peace-time* weapon of passive resistance, we shall simply be brushed aside, and forcible possession will be taken of the governmental machinery of the country at the point of the bayonet. We are told that when at a recent meeting of the Congress High Command, Mahatma Gandhi unfolded his plan to the sceptical Provincial Ministers, they laughed the idea out of court; if this is true, they deserve credit for some clear thinking, but it is a pity that since they dispersed they have so far taken no positive steps in any other direction.

The general air arm is divided into two broad categories, *viz.*, the bombers and the fighters. Of course, there are special types of machines for scouting and aerial photography, transport of troops and for throwing smoke screens. The Russians are even stated to have turned out a sort of flying ambulance useful in the remote parts of their far-flung empire, where medical aid is hard to find. But the main categories are the two mentioned above. The bombers are intended for attack and the fighters for protection and defence. The former are large-sized machines skilfully camouflaged, comparatively silent and capable of rising to great altitudes with a heavy load, and having a large flying radius. The firm of Glen Martyn of America have announced a bombing machine which will have a flying range of 11,000 miles with a load of several tons of missiles. The bombers are well-balanced and steady in fight, but they are not usually very swift or equipped with more than one or two machine-guns. Their purpose is to take up in the air heavy loads of high explosives or incendiary bombs and drop them with as great precision as possible upon the targets below. The art of aerial bombardment has made remarkable progress in recent years. The machines are capable of climbing up, fully loaded, even to a height of 25,000 feet and drop their deadly missiles with a fair degree of accuracy on their ground objectives. In certain experiments carried out in America a year ago, the bombers were able to register a direct hit on a moving target ship three or four times out of ten, from a height of about 10,000 feet. Since then still better results are stated to have been obtained. In the recent air raids on Barcelona, fires were started in or near military objectives by aeroplanes, flying at a height of 20,000 feet.

A small boat like the Panay was directly hit at Nanking in a few minutes, while steaming at some speed. Anti-aircraft devices are, alas, of uncertain utility. For one thing, the fire is so dispersed that it is not effective; besides, the strongest gun so far made is not able to meet its mark beyond a height of 12,000 feet, although the British claim for their 3·7's a range much higher than this. Since the bombers usually keep above this altitude the guns rarely do more than scare them off from short-range attack. But as already pointed out the bombers are able to do their fell work from great heights. The few bombers which have been shot down by anti-aircraft guns appear to have been surprised when flying low, or while diving for a hit against a comparatively difficult target. It is also possible that they might have lost height owing to mechanical failure and then run into a withering fire.

The principal weapons against the bombers are the fighters. The latter are comparatively small machines, usually manned by two (a pilot and a fireman), and capable of very high speed and effective gunnery. The latest models are said to travel at nearly six miles per minute. These monoplanes are supplied with powerful machine-guns which spit fire fore and aft at a terrific velocity. The chaser planes are built not only to stand severe aeronautical strain but to be able to manœuvre with ease and rise rapidly into the air in a few seconds. Their cruising range is limited and they cannot carry much load but they are essentially built for swiftness of attack. The moment an enemy air armada is sighted, these fighters will swarm up into the sky like locusts to intercept the invaders before damage is done. It must be remembered in this connection that bombing planes are never sent out without an escort of fighting planes

to ward off attack. Otherwise, the bombers will be usually at the mercy of the defender's air attack as has often been proved in the Spanish war. The British air expert, Air Commodore Charlton thinks, however, that the fighter is now greatly restricted in its scope and forms of attack, as compared with the bomber, which is now-a-days more protected by armaments and even armour plating than before, and has nearly as much speed as the fighter. The strength of the air escort varies with the anticipated opposition. Where the defenders are known to have no air equipment, no escorting will, of course, be necessary. (Witness in this connection the bombing of the villages on the Indian Frontier, in the French Morocco and in Palestine.) When a stiff aerial resistance is expected, it is essential to have adequate fighting accompaniment for protection. In the Spanish war, it was proved that it was nothing but suicide to take out bombing machines without a convoy of chasers. The fighters are also employed in ground engagements as a supplementary means of attack when countering a comparatively ill-equipped foe. In Palestine and in China, it has been reported that enemy infantry were frequently machine-gunned from the air, and in the later stages of the Great War, the German means of communication were seriously jeopardised by such air raids.

The new rise of the air power has nowhere so decisively exploded the old military theories as in naval warfare. Hitherto nations measured their strength on water in terms of the weight of their flotilla and the range and the size of their guns. In the last War, England, safe behind her "wooden walls," commanded by means of her naval strength all maritime routes, and practically starved into surrender through an iron blockade the Central powers who

were otherwise still capable of fighting on land. Although Great Britain has had to climb down from the ambitious pedestal of a "two-power standard" in naval equipment, yet till the 'twenties, she was considered to be invulnerable at sea. The rapid improvements in aerial science since then have caused great misgivings in the minds of the protagonists of the big ships. It may be remembered that Bernard Shaw once said that the dreadnoughts were as dead as the Dodo, and hence the politicians were talking of limiting them. The last War proved inconclusive as regards the utility of the capital ships. The dreadnoughts were so costly and so essential for keeping up the morale of the people, that the sea-lords were nervous of entering into pitched engagements, where the loss of a few capital ships might mean either a catastrophic defeat or a Pyrrhic victory. The naval guns, moreover, could fire only about 200 rounds without melting away. Their use was, therefore, avoided as much as possible. The battle of Jutland was an anti-climax to the vaunted potency of Britain's senior service. The advent of the air arm caused such a furore in naval circles that committees were appointed to decide the future of the dreadnoughts. The outcome was naturally inconclusive, but it was recognised that the battleship, though essential, was not unassailable by aircraft. Over-deck protection consequently became a matter of concern. The tendency is now, therefore, to armour heavily the vital parts of the ship exposed from the air. In addition, all the big vessels carry naval planes, either in their own bodies or in auxiliary carriers, to ward off bombers. During the recent fleet exercises in British waters, an experiment was made of dividing the contending squadrons into those consisting of capital ships only and those compris-

ing smaller cruisers supported by a strong naval arm. The results are not announced beyond the statement that the capital ships received full notice of the air attacks fifteen minutes ahead, but the division of the combatants is highly significant in view of the naval situation in the North Sea. It is doubtful whether the big battleship is now sufficiently impervious to aerial attacks. It has been mentioned that experiments in the bombing of target ships have been very successful. The big ships offer such a large mark that to hit them is not difficult. Their deck protection can never be adequate against bombs which pierce through three or four feet of concrete masonry and blow up a hole about the size and depth of a city block. In the Spanish war, evidence of this superiority of the air arm was forthcoming in the attack on the German battleship, *Deutschland,* which was subjected to fire unexpectedly by two Red bombers and heavily damaged in spite of vigorous anti-aircraft action. The Spanish Nationalist warship, *Espana,* is claimed to have been sunk by the Republican aeroplanes in a similar fashion. Early in the same war, the cruiser, *Jamie I,* was seriously injured in an air attack and rendered *hors de combat.* The destruction of the Panay off Nanking without casualties to the attackers has already been mentioned. It can be taken, therefore, as established, that the superiority of the battleship no longer remains uncontested. Even if efficient anti-aircraft guns be carried, these cannot be effective against bombers which, regardless of their own destruction, power-dive on to the deck of a ship with terrific speed and impact. If this be the case with armoured dreadnoughts, the situation is much more serious as regards merchantmen. They are absolutely at the mercy of the hostile action from the air, as the destruction of many

trading vessels in the Spanish war has proved. General Franco through his superior air equipment has successfully prevented much aid reaching the Reds through sea, by sinking many freighters and scaring off the rest. In a future war, the countries dependent on sea-borne supplies of food-stuffs and munitions will be at a serious disadvantage, as their mercantile arrangements are sure to be paralysed by indiscriminate air attacks. England especially is faced with a crucial problem. In the last war, she was still ruling the waves in most parts of the world, as Austria had no navy worth the name and the German grand fleet was bottled up in the Kiel Canal. She was, therefore, able to import extensively war materials and provisions, and to transport troops from the Dominions and from America, at least till the German U-boat organisation became troublesome. In the latter years of the struggle, submarine inroads played such havoc with British supplies that the Allied position became critical in 1917 and there was even talk of a separate peace. Only the entry of America into the war with her immense shipping resources and the development of new anti-submarine contrivances (*e.g.*, the famous Q-boats) saved the situation.

The rise of Italy as a first-class power is in a direct ratio to the growing importance of military aviation. Till a few years ago, she was distinctly second-rate. Her sea communications were at the mercy of both France and England. As Commodore Charlton remarks in his book, *The New Factor in Warfare,* the Abyssinian adventure could hardly have been proceeded with in the face of the mildest English protest, had it not been for the stimulating sensation afforded by the knowledge that she (Italy) was the air power *on the spot,* much stronger in that arm than



A squadron of Italian war planes (Savoias, Fiats and Capronis) at Addis Ababa.

any other local combination. In the Commodore's words, "It is in being the air power on the spot, locally based with the establishment and productive plants in her own backyard, flying familiar ways, and with the mere bottle-neck between Sicily and Tunis to guard, that the key of Italy's renaissance is to be found. Italy confronts us across the narrow entrance to the Red Sea with the large superiority in air force and the blocking of the Suez Canal by action from the air, however closely it were guarded, is a perfectly feasible undertaking for determined airmen. In doing so, true enough she would be cutting off herself from sea communications with her newly conquered eastern empire, but the army from Lybia would also be attacking Egypt and there is rail connection down the Nile with a branch to the Red Sea. Even if reinforcements from India and the Dominions out East did get past Babelmandeb safely and attempted to disembark at Port Soudan and rail up north, the Suez Canal being out of commission, the branch line is so vulnerable to air attack and so short a flight from the Italian air bases, that it could, without much difficulty, be made and kept unusable."

These unambiguous words of an expert authority are highly significant in the light of recent developments, especially in relation to the situation in Egypt and Palestine. It reveals how much in jeopardy England's position is in the Mediterranean and how little reliance can be placed on effective naval and military contact between India and Britain in the event of another world war with Italy opposing us.

CHAPTER II

THE AERIAL ARMAGEDDON

An estimate of the comparative air strength of the various nations will be useful as well as instructive as an indication of the leeway to be made up by India if she were to arm herself to the full measure of aerial defence. Till a few years ago, France was probably equipped with the strongest air force in Europe, but since the rise of Hitler, she has had to yield that place of pride to Germany. By the Treaty of Versailles, aircraft was absolutely forbidden to Germany. However, the prohibition was swept away by the Nazis, who, believing that a disarmed nation has no rights, promptly proceeded to march to their allotted place in the sun, by providing themselves with some of the best mechanical accoutrements of war. In 1935 alone Germany is supposed to have spent £800 millions on her defences. The current figures are likely to be well above the milliard mark. The German air strength at the end of 1935 was estimated by the Soviet Military Commissar at 3,750 first-line machines. Since then tremendous advances have been made, practically all the spare industrial strength of the nation being mobilised in the production of aircraft. The principal types of machines are the Junkers, the Dorniers, the Hinkels, the Mercedes and the Messer Schmidts. The Junker works at Dessau have been greatly expanded, the working staff of the plant being increased by 13,000. Recently, large purchases of necessary material have been made abroad; for one type of machine alone 22,000 castings were purchased from the United States, sufficient for producing 3,000 aeroplanes. Since the war scare in the United

States, supplies from that country have petered out, but a local aeronautical industry has also recently been set up in Austria and the total annual production is currently estimated at 8,000 machines. Even this enormous number is probably an underestimate. The utmost secrecy is being maintained in the matter, but it will not be an extravagant estimate which would place the mobilisable German air strength at 10,000 first-line aeroplanes at present. In about a year's time, this number will be doubled at least, as Herr Hitler has made no secret of his aim of securing for Germany a "two-power standard" in the air. The significance of this huge air armada is not lost on Germany's neighbours. London, which is admittedly the most exposed city in the world, will be practically at the mercy of the enemy if only a thousand of these machines can reach their objective, with their terrible cargo. As Commodore Charlton observes, London is the Achilles' heel of England's defence; by striking it and striking hard, the enemy can hope to lay Britain low. This is so because a total of 15 million souls or about one-third of the population of England is densely concentrated in a small area surrounding the City of London. The danger is further heightened by the fact that for all social services, food supply, and municipal co-ordination, this population is utterly dependent upon the central metropolitan organisation.

In a computation made by M. Piere Cot, the French ex-Minister for Air, a year ago, the first-line strength of the leading nations of the world was estimated as under:—

Russia	... 4,000	Great Britain	... 2,000
Germany	... 3,500	France	... 2,500
Italy	... 2,000	Poland	... 550
Czechoslovakia	... 550		

These figures are already largely out-of-date and it is recognised now on all hands that the German air strength is much larger than that of France and England put together. Moreover, the production-potential of Germany is much higher than that of both England and France. Since the wastage of aircraft in a real war can be as high as 50 to 100 per cent per month, this factor of production-potential is of supreme importance. England, on the contrary, has such a low production-potential at present that she is forced to obtain her supplies from America. It is significant to note in this connection the recent utterances of the French Air Minister, M. La Chambre, who, while ordering 200 Curtis-Wright machines from the United States, remarked that the German pursuit planes were twice as fast as the French ones, while their bombers were also considerably faster. "France can produce," he added, "only 30 or 40 bombers in a month, as against Germany's 500."

General Veuillemin, the French Chief of Staff, recently visited Berlin and submitted a report to his Government about German armaments. He said that Germany had a production of 800 machines per month and a production-potential of 2,000 machines per month, and that she was concentrating on four important types: a new Dornier heavy bomber with four Dornier-Benz engines of 1100 h. p. each, capable of carrying a bomb load of 2 tons and a speed of 350 miles per hour; a medium bomber of smaller size but greater range; a single-seater fixed-gun fighter, the new Messer-Schmidt, capable of a speed of over 400 miles per hour and mounting a cannon as well as a machine-gun; and a new heavy fighter with a speed of 360 miles per hour and mounting two swivel cannon in addition to machine-guns. This illuminating report, which was prepared for the

French Minister, was largely responsible for the cautious handling of the Czech question by the Anglo-French statesmen.

The German commercial machines also are numerous and efficient. They are so constructed that they can be easily converted into military use in a few hours and it is stated that Government specifications to this effect are compulsory. Huge underground shelters and covered aerodromes have been constructed at strategic points on the eastern and western frontiers. A great advantage which Germany possesses is that most of her air-fields are situated on the western frontier. This makes it easy for her to reach her French or British objective within a few minutes of the commencement of a raid. It is estimated that the air force defending a big city will require at least half an hour's notice to get ready to take the air and fight the invaders. The distribution of the German air force is such that Paris or London will not get the required 30 minutes' notice of a threatened attack. Berlin, on the contrary, is at a distance of not less than 60 minutes' run from the nearest French or English border. It has been calculated that for every 700 miles to and fro that the German bombers will have to fly when called upon for active duty, their English opponents will have to fly 1000 miles. Besides this 30 per cent handicap in distance, the English have to face the serious disability of having to fly most of their route over German soil.

The number of pilots trained in Germany is impressive. It is stated that the number of qualified pilots in Germany is about five times that in England and her training comprises also low-altitude parachute-jumping of which a recent exhibition was given by a whole battalion of troopers

with full equipment. The German aptitude for gliding, moreover, has given an air-mindedness to the nation. Even school children receive instruction in aviation and chemical warfare on a mass scale. Anti-gas training has been reduced to a science and elevated to an art. Night flying is highly developed and the latest gadgets of aviation are available to the pilots. The perfection of the Diesel aero-engine is a German achievement. It has added to safety and economy in flying and a greater " pay load " which will be useful in long-range bombing operations. Many mechanical improvements have been stealthily introduced and their effect in a future war will not be inconsiderable. Reliable evidence exists to show that Germany has invented a contrivance which would put out of action the electric appliances in any petrol-driven vehicle (whether it be tank or aero-plane) within a radius of a few miles. The importance of this discovery as regards military aviation cannot be exaggerated. It is said that in an obscure town in South Germany experiments have been conducted which show that no ordinary aircraft can operate within a mile of the city, when the " jamming " ray was trained against them. Diesel-engine machines, on the other hand, remained unaffected, as they have no electrical appliances.

Civil aviation has made immense strides in Germany and today Berlin is the busiest continental air-port. An experimental service is maintained with the South Atlantic, with airships and seaplanes supported by two floating bases, and this carries mails from South America to Berlin in three days. Besides running the most successful air service in Europe, the Luft-Hansa has services with Turkey, Iraq and Persia and is proposing a service to Japan and Australia. In time of war, this commercial equipment will certainly be

utilized for military purposes. In the Spanish war, the German bombers did excellent service, though their fighting planes were reported to be not so highly efficient.

Italy has one of the most powerful air forces in the world today. Its strength was estimated in 1935 at 3,500 machines, which figure was to be raised to 5,000 in 1938. The present accelerated programme has probably made even the latter figure out-of-date. In the Abyssinian war, the Italian airmen did commendable work. In Spain also the Italian fighting machines have given a good account of themselves. They were boldly and skilfully handled and despite heavy casualties obtained important effects. Much of the Rightist success on the Teruel front, which resulted in the march to the sea, was entirely due to timely aerial co-operation. The present commercial blockade of Republican Spain is also in a large measure achieved by a systematic bombing of the coastal harbours and the cargo boats inside the territorial waters. Italy's main aeronautical problem is the absence of petrol in her empire. During the Abyssinian war, she imported many million gallons from the Anglo-Persian Oil Company which was not above transacting a shrewd piece of business with the anathematised Italians! In civil aviation also she has not scored any notable successes. But the quality of her pilots is exceedingly good and their number is stated to be well over 40,000. It is well to remember that many aeronautical records are at present held by Italians. In a future war, the Italian air arm is likely to be a serious factor to reckon with. Italy has well-stocked air bases in Abyssinia, Somaliland and Eritrea, which are within striking distance of Western India, by means of long-range bombing planes.

Russia's air force is immense. In fact, if we are to believe the Soviet spokesmen, its strength has already increased to 13,000 machines. General Weygand, however, put the figure in 1937 at 3,000 first-line machines, it being understood that for each front-line plane, a duplicate was in reserve. Much concentrated effort has been expended on the Soviet air arm recently so that its strength is likely to be much in excess of the 6,000 units estimated by Weygand. A large part of the air force is stationed at Vladivostok, where, according to some estimates, as many as 2,000 machines have been assembled to spell ruin and death to the timber-and-paper cities of Japan. The Russian machines and their pilots proved much better than was expected in Spain, while in China they have not been able to register any spectacular successes so far. The Soviets claim technical and tactical superiority over German and Italian planes, but these claims are not generally admitted. The number of pilots is said to exceed 50,000, while ten times that number are stated to be qualified in parachute-jumping. Recently a demonstration was held in which a full battalion of infantry with machine-guns and other equipment landed perfectly by parachutes and got into fighting order without much loss of time. In war, this method of getting behind the enemy's lines is likely to prove most useful. Expert opinion of the Russian air power, as a whole, is not very flattering. An influential French critic recently reported that only the acid test of actual war can show how far the vast Communist aerial organisation can achieve results. This opinion was expressed before the recent purges which have succeeded in robbing Soviet aviation of its best guiding spirits. The execution of Marshall Tatauchevsky, in particular, has done irreparable

harm to the Red military efficiency. This probably partly accounts for the bold attitude taken at present by Japan in the Far East. At the time of the Munich crisis, Col. Lindbergh is reported to have expressed in his Report to the American Government a thoroughly unfavourable opinion about the Russian air force. This expert verdict probably had a vital influence in the subsequent Anglo-German negotiations. Lord Winterton has also revealed in a public speech that the British Government's attitude was largely guided by the fact that the Russian military power was largely overestimated.

France easily led the world in air equipment in the 'twenties, but has latterly lost its lead to other countries, as admitted by Minister Pierre Cot in 1937. At the end of this year, it was stated that the first-line machines numbered 4,000, but this figure has since been far exceeded although exact data are naturally very difficult to obtain. M. Cot stated that in 1937-38 the front-line machines would be increased by 180 per cent and the reserves by 80 per cent. These percentages appear to be underestimates, since it is learnt that almost all the industrial factories on the Seine have been impressed into the manufacture of air engines and munitions. The French air display in July 1937 at Villa Coreblay was most impressive, the Maraine-Saulmer low-wing monoplanes and the Farman fighters especially distinguishing themselves by their speed and airworthiness. These machines are now in mass production, while the Potez 54 machines, which proved very disappointing in Spain, are being gradually abandoned. Some critics, however, allege great confusion and lack of clear policy at Air Force headquarters, arising out of the fact that there have been seven air ministers since 1930.

In the Far East, Japan's air power is easily dominant. It is true a large Russian fleet is concentrated at Vladivostok, but its menace is as yet only theoretical. The Japanese, for their own part, maintain about 1,000 machines at Mukden and Harbin, within easy access of Vladivostok. The combined Japanese naval and land air force in 1936 was stated to total 2,560 machines. It was decided in that year to double the number of aircraft at a cost of £23 millions. The anti-communist pact with Germany has probably resulted in Japan obtaining some valuable military information especially as regards artillery and aircraft. Formerly, the Japanese used to import their machines from Germany and Italy. But recently aircraft factories have been set up all over the country and local production is proceeding apace. That the quality of the Japanese aircraft is excellent is borne out by the successes achieved by them in the Chinese war, where it is claimed that after the fall of Nanking over 400 Russian aeroplanes were shot down with fewer Japanese casualties. This achievement is claimed to have been repeated on a slightly smaller scale in the attack on Hankow. In commercial aviation also Japan is now coming into prominence. Regular internal and external services are being maintained with local machines of good quality. It may be mentioned that the Japanese machine "Divine Wind" set up last year a long-distance record, flying from London to Tokio (10,000 miles) in 94 hours. More recently the Japanese press has claimed the world speed record, in a closed-circuit run, for their machines.

The daring and intrepidity of Japanese airmen are commended by foreign observers who, however, are somewhat critical of their marksmanship. It is considered that

most of the pilots are short-sighted, owing to early habits acquired at school due to poring upon the difficult Japanese alphabet. The national rice-and-vegetable diet also is considered to be conducive to air-sickness. This criticism, if true, is becoming fast out-of-date by the rapid improvements in the Japanese aeronautical schools, whose business is now to turn out pilots in no way inferior to those of Japan's great allies.

Of all the nations in the world the United States has the best commercial organisation for manufacturing aeroplanes. This is due to her great natural resources, the skill and influence of her inventors, the large size of her heavy industries, and the great expanse of her area, which makes her admirably suitable for civil aviation. In the last-mentioned sphere, the United States leads the rest of the world. The Pan-American Airways alone, the largest commercial organisation of its kind in the world, has a daily scheduled service of over 56,000 miles. The number of designers and manufacturers in the country is large, the most renowned among the latter being Douglas, Pratt-Whitney, Lockheed, Boeing and Ford. Glen Martyn and Sikorsky are the leading designers who have many achievements to their credit. Recently, considerable publicity was given to the Lockheed Electra planes which have been acclaimed as the fastest commercial planes in the world, and are being purchased by the British Airways in large numbers for their European services. The Douglas machines are used by the K.L.M. who supplement their Fokker machines with these American products. Inventions like blind-flying through radio beam, automatic Gyro-pilot, and a thousand and one other devices sponsored by the U.S.A. are widely used all over the world. The country is

equipped with an excellent network of aerodromes and seaplane bases. It also possesses the world's only available supply of helium, so essential for the safety of the dirigibles. It is interesting to record that the American Congress has recently voted a three-million dollar appropriation for a new helium-filled lighter-than-air airship for aircraft transport.

In military aviation she was not hitherto in the vanguard of the nations, but recently enormous advances have been made. For the budget of 1938-39 an appropriation of £151 millions was provided for Army and Navy air forces. In 1936 the total number of machines was estimated at 2,000 of which 1,600 were considered to be effective and 600 were under construction. This modest quota has now largely been exceeded and it is said that several thousand planes of exceptional speed and range have been ordered. Thanks to an elaborate industrial organisation, the strain of accelerated manufacture is well borne by the producers who are not only able to meet the local demand but also to cater for international requirements. Most of the countries outside the British Empire have been customers of the United States' aero-engineers. In the past few years, large supplies have been made to Russia, Holland, Spain, China, Siam and Persia. More recently English and French air experts have been canvassing for supplies from America and it is stated that considerable quantities of fighting machines have been already ordered.

The United States is in a particularly well-favoured position strategically. There is no inimically inclined foreign power of sufficient resources which is not separated from her coasts by a vast expanse of ocean. Still the anti-Japanese complex has a strong hold on Uncle Sam's

military men. This has resulted in a highly elaborate system of coastal defences in the west. Large and well stocked aerodromes have been established and anti-aircraft batteries set up practically in one impressive chain from San Francisco to the Mexican border. The islands of Hawaii (known as the Singapore of the United States) are humming with activity on the part of the air authorities. The Pacific islands of Wake, Medway and Guam, which are under American sovereignty, are being fortified as air bases and small squadrons are proposed to be established there. The number of qualified pilots is being extended at an increasing pace and large sums are being spent on aeronautical research and scientific experimentation. The unexpected weakness shown by the European democracies and by Russia has made America nervous of her own safety, especially since the range and destructiveness of the bombers have increased beyond recognition. Recently President Roosevelt announced an air programme of 7,000 to 10,000 first-line machines to strengthen America's air force.

What about proud Albion, whose sea-girt isle, hitherto well-nigh unassailable behind her "wooden walls," is now threatened by the rise of air power and the invincibility of the bomber? There have been complaints that in the air her effort has been on much too small a scale and that it has been characterised by bureaucratic lethargy. It is contended by the Government's critics that Germany and even Italy are gaining largely upon England. The shadow factory scheme initiated by Lord Swinton has been the target of many criticisms. It is supposed to have led to favouritism and wastage; it is also considered to have resulted in a fragmentation of the output and in a multiplicity of types, some of which are inferior to those

of the German and Italian types. The resignation of the Air Minister has staved off an enquiry and covered up, with the admirable aversion of the British to wash dirty linen in public, the many shortcomings of the R. A. F. But this has not prevented much unfriendly criticism at home and abroad of British manufacturing efficiency. As regards commercial aviation, the record has been frankly disappointing. In spite of a subsidy close upon £2 millions and in spite of valuable gratuitous aid from various parts of the Empire (especially India), the Imperial Airways have woefully failed to live up to expectations. The Cadman Report has roundly condemned their personnel, their equipment and their policy and has suggested a thorough overhauling, including even purchase of foreign craft for the European routes. The subsidy has been raised to £3 millions and further smaller amounts are now being contributed by the Empire countries.

An Air Ministry memorandum issued last year stated that in April 1937 Britain would have about 100 squadrons (1400 machines) at home, 20 squadrons (280 machines) with the Navy, and 26 squadrons (364 machines) overseas. These figures are so unimpressive, that it has been assumed that they are a deliberate understatement. Captain Macmillan, a prominent authority on the subject, considers that of these machines about 50 per cent are obsolete. As a result of the German scare (which was reflected in the famous statement of Earl Baldwin that in future the English frontier was on the Rhine), a feverish attempt is being made to reach parity with the dreaded Teutons. A sum of £85 millions was asked for 1937-38 and an establishment of 70,000 officers and men was aimed at. A Home Air Force of 2,000 machines was planned but the actual production

at the end of the year showed the programme to be about 50 per cent in arrears. Of the 45 aerodromes planned, only 26 were completed at the end of 1937. These figures make a sad comparison with the estimates of the strength of Britain's rivals. M. Jean Villars, a competent French observer, thought that the Germans had by June 1937 over 4,000 first-line machines of the most recent patterns, housed in 280 aerodromes, many of which had underground shelters. He also considered that the Germans could turn out 450 machines a month as compared with contemporary British capacity of 100 machines for the same period.

Recent efforts have done much to remedy the situation. The shadow factory scheme has been organised on a larger scale, with the help principally of the motor-car manufacturers. In the current year's budget an allotment has been made of nearly £200 millions for air armaments. Recent reports are apparently encouraging especially after Lord Nuffield was placated and coaxed into friendly co-operation. In the Parliament, the official spokesman recently referred to two firms receiving orders for an aggregate of 4,000 machines to be delivered by 1939. Since there are nearly a dozen firms co-operating in the shadow scheme, the number of machines under construction must be very large. Lack of skilled labour is handicapping production and this has necessitated a requisition for assistance being made from the United States and Canada. It is likely that large purchases will be made from these countries to make up local deficiency, but even with this supplement, it is doubtful if England will reach air parity with Germany, when we consider that Germany has had an earlier start and that she is now in a position to mobilise

Austrian and Czecho-slovakian resources in the race for armaments.

In the matter of air defence, England is far behind her continental rivals. This is partly due to an insufficient public realisation of the horrors of aerial warfare and to a pacific sentiment among the rank and file of the population whose active co-operation is essential in the defence arrangements. There has been a slight improvement of late, but the leeway to be made up is tremendous. In Germany, the Hitler Youth and other para-military organisations are rendering invaluable help in organising air defence. Millions of air-wardens have been appointed in that country who will spring to action the moment warnings are given by the national radio hook-up. In England, on the contrary, there is great lethargy among the possible recruits to the Air Volunteer Force. London, especially, with its 7 million inhabitants, is very sparsely protected against air attack. A "balloon barrage" has been arranged and gas masks provided on a colossal scale; but it remains to be seen how far these passive mechanisms will function smoothly in a period of stress. During the Czech crisis, the English A.R.P. organisation all but broke down. It was widely realised that the defence of the big cities, especially London, was very inadequately organised. Gas masks which were distributed in millions proved to be defective in quality and improperly fitted up with spare parts. In spite of the anti-aircraft guns all over South England being commandeered for London's defence, it was found that the supply was totally short of the minimum technical requirements. Large parts of the country, moreover, including most of the Provincial cities, were left unprotected. The arrangements for moving the non-combatants out of the big





A heavy anti-aircraft gun in use in Austria. Note the camouflaging

cities were revealed to be unsatisfactory, and the Government instructions on the subject were described as "the sloppiest ever issued by a public department." Ministerial spokesmen unanimously admitted that the crisis had revealed serious gaps in the Government defence organisation.[1] To many Britishers, this confession, coming as it did after three years of much-advertised and costly preparation, proved to be a great shock. The truth of the matter was that the technical and industrial arrangements at the back of the Scheme had proved unreliable, inadequate and dilatory.

Expert critics of the British Government (most voluble amongst whom is Mr. Churchill, the *enfant terrible* of British politics) have made no secret of their opinion that the periodic complacent utterances of Treasury front-benchers about Britain's aerial superiority are just so much eye-wash and propaganda. As Commander Fletcher, M.P., mentions in his publication, *Britain's Air Strength,* the British aircraft is, in every sphere, much behind that of Britain's rivals. For example, he mentions the fact that the English bombers (the Wellesleys, Whitleys, Harrows, Hendons and Blenheims) had only a war range of 800 miles as compared with the German Heinkel's range of 1,000 miles, the American Boeing Y. B.'s range of 2,000 miles and the Italian Caproni's range of 2,175 miles. The principal fighters, designed in England, are the Hurricanes

[1] The British War Minister, Mr. Hore Belisha, revealed in September last to the Commons the chaotic condition of London's anti-aircraft gunnery. He said, "Some of the guns were without dials because the firm which made them went bankrupt. The guns sent from the practice camps became separated from their instruments. They were sent into action without overhaul. Some predictors were out of order. Electric storage batteries were run down .... and some stores were found to be deficient."

and the Supermarine Spitfires, if we exclude the superseded models like the Hawkers, Demons, Furies and Gladiators. But of the Spitfires, which were passed in test as early as 1935, there are very few in service, while the Hurricanes are available only for a few squadrons. The German counterparts of these, *viz.*, the Messer-Schmidts and the Fokkers, are capable of much higher speed and have Venetian blind wings, which afford quicker deceleration and greater manoeuvrability. Even the American Seversky's (not to speak of the Lockheed Super-Electras) are capable of more speed than the Hurricanes.

The main reason for the British inferiority in the air is stated by competent critics to lie in the absence of capable technical experts at Air headquarters and, more particularly, in the pernicious system of limiting manufacture to the Pool or Ring. This Ring consists of 19 old-established aeroplane manufacturers, who did good work in the last war and who have been allowed a practical monopoly of aeroplane designing and construction. Although there are over 130 other aero-manufacturers, they are not permitted direct contact with the Air Ministry, but are reduced to the position of sub-contractors to the Big Nineteen. An expert observer says that the Air Ministry's policy of restricting its custom to a close corporation of privileged firms has not been justified by results, as it has merely led to 260 per cent inferiority in first-line strength and a 460 per cent inferiority in the production-potential, as compared with Germany. It is significant that ever since the armament rush of 1934, the Ring has been making fabulous profits, while the 130 " outsiders " have been consistently piling up losses.

To make up the dangerous deficiency in aerial equip-

ment, the Government have initiated the Shadow Factory Scheme, spending £6 millions in erecting 8 factories to be run by the motor-car firms of Austin, Rootes, Daimler, Rover, Standard and Morris. These factories are intended to produce component parts, which will be put together in two large assembly plants. Yet, three years after their initiation, these factories have not produced a single aeroplane! Commander Fletcher observes that the Shadow Factory Scheme is not sound. In his opinion, when they start producing, their Machines will be found to be out-of-date and inferior in quality. Their principle of production (*viz.*, "cost *plus* profit," so notoriously helpful to profiteers during the war) is extravagant and undesirable, and is condemned by impartial observers.

Another disquieting feature of British strategy is the great paucity of skilled workmen which has resulted in War Office orders being placed outside the country, especially in Canada. The fact is that England, lacking in essential raw materials and food-stuffs, has to keep her export industries running for providing herself with the essential imports. The strain of rearmament on her industrial personnel is interfering with her normal trade with the result that the one has to be sacrificed to the other. Already England's adverse balance of trade is increasing, and to the extent of the increase, the country may be said to be drawing upon its capital resources. Though England's capital accumulation is vast as compared to that of Germany or any other rival (barring the United States), the fact remains that her system of production and trade has been attuned to the peace-time requirements of her population rather than to a war economy. Germany, on the other hand, has learnt to depend less on foreign supplies and, while in regard to the

necessaries of the population her ideal is increasingly that of self-sufficiency, her whole system of production is now based on the economics of war. With a larger population than that of England, she is able not only to feed and clothe herself adequately, if not in rich profusion, but also to build up her armaments on a scale undreamt of by any other nation. Neutral observers now recognise the truth of Field Marshal Goering's assertion, in September last, that he could solemnly state without any exaggeration that Germany had the strongest air arm in the world. The same observers have learnt, through repeated exposure, to discount the flamboyant utterances of British statesmen concerning the state of their armaments. The reason why the two great European democracies are lagging behind is not far to seek. Rearmament on the modern high-pressure scale requires the united effort of the entire nation and only a totalitarian endeavour on the part of capital and labour can achieve it. In France, there is a serious and persistent working-class intransigence, which, coupled with acute financial embarrassment, is severely impeding the armament programme. In England also there is a lack of co-ordination between the Trade Unions and the leaders of industry. Further, the heavy financial drain of the social services and the popular apathy to voluntary defence effort have worked against speedy rearmament. In fact, there is so much intuitive dislike and suspicion of the present Conservative Government on the part of English Labour that left-wing writers anticipate that, in the next war, it will be part of German strategy to set up the working classes against the well-to-do, so as to weaken the war-spirit among the people. When war breaks out and the Britishers at home are made to realise its horrors in actuality, two things are likely to

happen. Either the propertied classes will suppress civil liberties, popular criticism and opposition as they did during the last war, or the proletarian groups may attempt to cry halt and put a premature end to war by conceding the enemy's territorial claims.

CHAPTER III

THE COMMAND OF THE OCEANS

THE lessons of the last war have taught European powers to place small reliance on imports in the matter of essential war supplies and to make their own countries as self-contained as possible. The current military watchword is *strategic autarchy*, which means absolute self-sufficiency in all materials essential for the conduct of a war. To this end national resources are being tapped to the utmost; where certain types of goods like rubber, tin, copper, petroleum and nickel are not available locally, substitutes are being investigated and manufactured. Germany has taken the lead in this direction and it is stated that in the event of another war, she will be practically independent of foreign supplies of even tropical products like rubber and jute. Where no substitution is practicable, she is accumulating large imported reserves, including crude oil from Mexico. Japan, who is short, among other things, of petroleum, tin, iron and rubber, is adopting the same method, though in her case, the threat of naval blockade is not perhaps so serious as in the case of Germany. Great Britain is, however, in a somewhat difficult position. She can feed her millions only for three months in the year. Apart from iron and coal, she is dependent on foreign supplies for most of the war materials. During the last war, she drew largely upon the United States and to some extent upon Spain and Japan. The American Neutrality Act makes it doubtful if she can depend on munitions and food supplies from that country, as many American critics feel that they committed

in the last war the dual mistake of supplying materials on credit to clients of dubious financial rectitude, and of getting dragged into the war owing to enemy interference with these very supplies. Granting that England is piling up war reserves on an unprecedented scale, even a short spell of war is bound to deplete this stock. It is true that several millions worth of wheat, whale oil and sugar have been laid by, but this does not seem to have solved the problem of food supply in a prolonged international duel. Hence she is full of apprehension about entering into a life-and-death struggle with a European power. She knows that in the event of war with Germany or Italy her naval power cannot now ensure an adequate supply of war materials or food, owing to the vulnerability of merchantmen to air attack. In the Spanish war, several ships conveying material to the Reds were sunk, while *en route* or in territorial waters, by Nationalist airmen. It will be obviously impossible to provide air protection for every commercial vessel. The prospect of equipping each vessel with anti-aircraft guns, moreover, at the expense of the State is a staggering one and, therefore, a proposal to that effect was scouted by the Prime Minister. In the absence of convoys, the latter will be likely to fall an easy prey to hostile aircraft kept cognisant of their movements by wireless, from either submarines, or spies and informers in friendly neutral countries. England is aware that the only means of protecting her naval communications is to provide herself with such superior air force that hostile air action will substantially be impeded.

England's eastern routes especially appear to be in jeopardy. A glance at the map of the Mediterranean will reveal the dangerous implications of a war with Italy.

The latter occupies an exceptionally strong position in this area. Her naval strength is reputed to be equal to what England will be able to concentrate at a time in these waters. Recent controversies about the parity of the strength in the Mediterranean revolve round the question whether Italy will tolerate, in what she claims to be her own special "lake," the presence of naval armaments superior to her own. She views with an unfriendly eye the presence of British dreadnoughts so near her own coast. The result has been that Italy has been strengthening her navy extensively, especially as regards under-water craft. A powerful naval base has been built at Tripoli, which is only 300 miles across the sea, and the island of Rhodes has been fortified and its harbour works extended. Sicily which is separated from the African coast only by a stretch of a hundred miles of water has also been turned into a naval base, which will seriously menace England's "life line" with the East. There are several islands in the hundred-mile strait, belonging to Italy, which are reported to have been fortified. The most important of these is Pantellarina which lies practically midway on the trade route and is causing much concern to England's sea-lords. The present negotiations with Italy are stated to include a proposal to de-fortify this island.

The situation as regards the Balearic Isles is very illuminating. These Spanish possessions consist of about 15 islands, the most important of which are Majorca, Ivizia and Minorca. The former two are in Nationalist hands, while the last is still Leftist. The French and British warships have been swarming round this last-named island, since precautions were ordered, according to the *New York Times*, that these vessels should be present to prevent a seizure of Minorca by the Rightists. England has always

THE SPANISH MENACE

See reverse.

NOTES ON THE MAP "SPANISH MENACE"

This map brings out the position in western Mediterranean. It will be seen that there are two life-lines passing this area, namely, the life-line of France running from Algeria to Toloun and the life-line of England running through the Straits of Gibraltar to Malta. It will be seen how the contiguity of the Belearic Islands to both these life-lines makes their possession by the Spanish Nationalists a thing of great moment to Britain and France. Now that Barcelona and Gerona have fallen, and the whole of Catalonia overrun the conquest of the rest of Red Spain will probably take only some months more, and by the end of this year it is likely that the whole of Spain will pass into Nationalists' hands. If this happens, Italian and German influence will predominate in the whole of western Mediterranean and the security of the two life-lines above-mentioned, as well as of Gibraltar, will be greatly imperilled. At Ceuta, opposite Gibraltar, it is said that heavy fortifications under German supervision have been arranged for. Since the book was written, even Minorca has passed into Franco's hands. This will be a great blow to France, and will materially alter the balance of Naval power in this area.

cast hungry eyes on this island (which she even held for nearly 50 years in the 18th century) and it was rumoured that before the Spanish Civil War started, Britishers were building large fortifications on it. A year ago, Italy virtually seized Majorca and Ivizia in the name of General Franco and it may be remembered that the German battle-ship *Deutschland* was bombed while coaling at the latter island. Britain and France held their hand then, because Minorca, which has in Port Mahon the finest harbour in the Mediterranean, was in the hands of the Republicans.

France also has her life-line in the Mediterranean. The line runs from Marseilles and Toulon to Algiers in Algeria, whence she would draw her supply of men and material for her famous Maginot Line on the eastern frontier. It is not difficult to visualise the potential danger to the Allied States by the rise of the Italian power and the emergence of Spain as a strong fascist nation. The two latter countries together can not only jeopardise the life line of the members of the *entente cordiale* but can also effectively block the Mediterranean route altogether. At the mouth of the sea lies Gibraltar. Hitherto this place was considered impregnable by land or water and was a veritable tower of strength to the British navy in European waters. Recent events have caused grave misgivings about the utility of this port. Across the straits at Ceuta (which is only 25 miles away) the Spanish Nationalists have created a strong naval base reputed to be equipped with powerful artillery of German make, which will render the harbour of Gibraltar unhealthy for English seacraft. On the land side, the Nationalists have encircled the harbour and in the event of war they are likely to prove very irksome to the British garrison. Further, the danger of aerial bombard-

ment of the harbour has to be faced and enough has been stated to indicate how real the danger is. Although Gibraltar may hold its own owing to the strength of its rock galleries, it will practically be useless as a naval base in a future war and may not even ensure the keeping open of the straits to friendly shipping. That the English realise the danger full well is shown by the recent pourparlers with Portugal. England is now busy enlisting Portuguese support with two objectives; one to ensure hospitable waters in Lisbon and Oporto in times of stress and the other to keep open an alternative route to the East round South Africa. Portugal is supposed to command the West African littoral and it has been rumoured that English and Portuguese military engineers are busy strengthening this route against possible contingencies. A powerful naval base on the Singapore model is under construction at Cape Town for the same purpose.

At the other end of the Mediterranean is the Suez Canal. It is owned internationally and all powers are pledged to its neutrality but it is well known that in the event of a major war, international obligations will not prevent this neutral region being violated. Italian story-writers have made it a theme in their romances for daredevils of their country to block up the Canal either by dynamiting it or by sinking heavy barges in its narrow waters. That England does not consider this possibility as remote is shown in her anxiety to placate Egypt. Britain's unwillingness to relinquish Palestine is similarly explained. A hostile Arab Government in power within striking distance from the Canal is a source of much potential danger. France too is probably actuated by similar motives in her dealings with the Syrian demands for complete independence. Besides

NOTES ON MAP "ENGLAND IN THE MEDITERRANEAN"

This map shows England's life-line in central and eastern Mediterranean. It also shows the predominance of Italian naval and aerial power in this area. The narrow Straits between Sicily and Tunisia and the island of Pantellaria lying in the middle of the Straits show clearly how Italy will be able to seriously menace England's communications with the East. In the eastern Mediterranean also Italy possesses strong fortified bases at Rhodes and Dodekanesia. The importance of the control of the Suez Canal to Britain is also shown in this Map as well as the strategical position of the harbours of Haifa, Alexandretta and Alexandria. It may be mentioned that Lord Gort is now inspecting the defence works at these harbours and in the Suez Canal area. The untenable position of Malta is also evident from this Map. The Italian claim to Tunisia is also explained, as the control of this protectorate will make Italy the mistress of the narrow entrance into eastern Mediterranean, and enable her to use this advantage as a counterblast to the English control of the Suez Canal.



ENGLAND IN THE MEDITERRANEAN

See reverse.

commanding the oil pipes from Mosul, the Syrian littoral contains excellent harbourage, which, if available to hostile navies, will imperil the Suez Canal. It must be remembered in this connection that Italian influence in the Near East is great and increasing.[1] Italy owns Tripoli in North Africa and thus impinges on Egypt which she is expected to use as a jumping-board, in case the Suez Canal is blocked against her. South of the Canal she is the mistress of Eritrea, Abyssinia and Italian Somaliland all of which command the Red Sea routes. Mussolini's bid for Arab sympathy, by posing as the "Sword of Islam," has had a magic effect on Arabian sentiment, which is definitely anti-British today. The imbroglio at Alexandretta has a similar explanation. The Gulf of the Sanjak (District) contains the best harbour in Eastern Mediterranean. The aim of both French and English diplomacy is to see that the Sanjak does not pass out of friendly Turkish hands.

While even in the Near Eastern waters England's supremacy has thus been strongly challenged, in the air she has, as already pointed out, suffered a definite eclipse. The Italian air power is supposed to be so strong that it is considered that even Malta is not a safe harbourage for British ships. Italy has air bases in Tripoli, in Eritrea and in Abyssinia. From these bases, she is within striking distance of Malta whose people are greatly pro-Italian. The vulnerability of surface vessels to air attack has already been mentioned. A short while ago, an American discovery

[1] Those interested in the subject of the Italian ambitions in the Near East may read about the Duce's plan to conquer Arabia in Ladislas Farago's book, *The Riddle of Arabia.* Farago proves in this book that the conquest of Yemen and South Arabia is already planned by the Quirinal and that it is waiting only for a favourable opportunity. Indian readers need not be told how near to Arabia is Sind.

of a new type of aerial torpedo was announced. It was stated that this device was so sure and so deadly that the inventors were afraid to take a patent. It is surmised that the air torpedo will be run on radio or on magnetic principles. It may, like the Queen Bee, be manoeuvred by directions from the ground or from the parent plane; or more probably it will be fired from the air and then left to find its target through a process of magnetic attraction. It is obvious that the air menace has assumed new and terrifying proportions. British fleet exercises in 1935 and in 1937 have proved that squadrons of warships are highly vulnerable when in fortified harbours which are within easy reach of hostile aircraft. There is today no harbour in Europe which can be regarded as secure against air attack by mere distance. The German air armada in the north and the Italian in the south have created new problems of the naval air arm to British and French navies.

While dealing with the problem of the mastery of the seas, it will perhaps be advantageous to assess in the orthodox fashion the naval efficiency of the nations most concerned. The latter is measured in terms of tonnage and gun-power of the bigger ships and the number of submarines and torpedo boats. It is, of course, clear that quantity is not a sure index, as much depends on seamanship, gunnery and skill, as also on boldness in manoeuvre, defence and attack. *Ceteris paribus,* a nation whose fleet has had experience of recent naval engagements and whose personnel have a tradition of sea-going behind them, is likely to give a better account of itself than one whose navy is untested in men and material.

The table below gives the approximate present strength of each of the first-class naval powers of the world:

TABLE

	England	U.S.A.	Japan	France	Italy	Germany	Russia
Battleships built ...	15	15	10	8	6	3	6(?)
Battleships building	5	7	4	5	4	3	3(?)
Cruisers (Battle) built	3	...	...	2	...	3	...
Cruisers (Battle) building ...	5	2	2	3	...	2	...
Washington cruisers	13	18	8	7	7	5	7
Other cruisers ...	44	21	19	12	12	6	2
Air-craft cruisers ...	11	6	6	1	...	2	...
Destroyers ...	83	75	56	34	44	12	...
Submarines ...	59	41	51	89	102	44	100(?)
Flotilla leaders ...	32	13	23	32	12	16	4

The table above will have to be accepted with some reserve as up-to-date information is naturally withheld by the war offices. The battleships shown as under construction will probably be launched by 1940 and 1941, as indications of accelerated completion are not wanting. Taking 1920 as the datum line, of the 20 British dreadnoughts only 8 will be modern vessels, although the rest have been refitted with thicker plates, additional guns and with under-water "blisters" considered to be so essential against torpedo attacks. The U.S.A. can claim 12 modern ships and Japan about 6, while France will have six new vessels by 1940. The German navy is most modern and consists of "pocket" battleships of superior speed, range and armament, as also submarines of exceptional efficiency. It is noteworthy that XVIII-inch guns are intended to be mounted by the Japanese navy in the ships under construction, while the others are apparently content with guns of

XVI-inch calibre or less. In the recent naval agreement between France, Britain and the United States, it was agreed that this should be the maximum size of guns, although the tonnage was raised to a permissible limit of 45,000 at the instance of America. In submarines and in coastal ships the Italians lead, while the British fleet is well-stocked with destroyers and flotilla leaders. The Washington limit of 35,000 tons for capital ships has now been definitely given up (each nation accusing the other of forcing the pace) and the "escalator clause" has been invoked for building ships of 45,000 tons. These ships will be monsters of great speed and terrible hitting power costing nearly £10 millions each, but it remains to be seen how far they will justify themselves in action.

The lessons drawn from the battle of Jutland are invaluable in this connection. It is argued by the English naval experts that this battle was inconclusive. In reality, however, the battle has proved two things, *viz.*, that the sea-lords are very reluctant to gamble their costly toys (derisively called H.M.S. *Unriskables*) in a fight to the finish and are inclined to skirmish and play hide-and-seek in the waters where the opposing forces are more or less equally matched. Secondly, the warships of the present era are unable to approach strongly fortified harbours or towns, since they will be ranged against much superior fire from the land guns and will have to run the gauntlet of enemy submarines and mines. It may be mentioned how the naval action against Gallipoli was a costly failure. It is admitted by competent observers that the case against the battleships is strong, considering their vulnerability to aircraft travelling at 300 or 400 miles an hour and to motor torpedo boats speeding at nearly a mile a minute. In this connec-

tion it is of interest to note that the Spanish Reds were able to sink the warship *Balearis,* off Barcelona, by a lucky torpedo discharge recently. But if a dreadnought is to be built at all, she ought to have such gun-power as to enable her to hold her own against ships of her class. It is true that in the battle of Jutland, 21 German capital vessels, with only XII-inch guns, gave more than equal battle to 37 British dreadnoughts with XV-inch guns, and inflicted upon the latter twice their own loss in tonnage and personnel sunk at sea. This astonishing success with inferior equipment is, however, attributed to the excellence of German range-finding and marksmanship and to the faulty armouring of British vessels whose magazines were left exposed to well-placed shots. It will not be out of place to give some data here of the gun-power of these modern goliaths of the ocean. Their XVI-inch guns are of 45 calibre, weigh 105 tons each and fire 3 shells of 2100 lbs. each per minute. Their maximum elevation is ordinarily 30 degrees which gives them a range of 33,000 yards or 16 nautical miles. The muzzle energy of each gun is 98,400 tons, so that a broadside discharge (weighing 16,000 lbs.) gives a muzzle energy of over 800,000 tons which is enough to lift a ship of 35,000 tons twentyfive feet in the air. The terrific hitting power of such ships can well be imagined. One such ship will lay in ruins unprotected towns within a few minutes.

It will be interesting to analyse succinctly the relative strength of the navies of the great powers. In point of size and modernity, the Americans take the lead. The eternal distrust of Japan and the difficulty of obtaining quick assistance from Europe have made the demand for a navy on either coast, equal to the best on either side which

could be matched against it, plausible with Uncle Sam. A Japanese surprise invasion of the west coast, while the main fleet is in the Atlantic and the Panama Canal is put out of action, is a favourite bogey with the American big navy men. Against Britain's 28 super-ships, she has 40 built or building and recently she has improved upon this figure by special naval appropriations aggregating over £250 millions. But America's strength is untested. She has practically never been in a real naval war in her whole history and it is difficult to say how far her quality matches her quantity. Besides, for reasons mentioned elsewhere, the American sea power can be practically ignored in connection with the coming Armageddon.

Of Japan it is possible to speak with more knowledge. The exploits of Admiral Togo in the Russo-Japanese war revealed that Japan had a fleet of extraordinary efficiency, commanded by officers whose brain-power and knowledge of the foe evoked admiration from the rest of world. While the Russian fleet proved grotesquely inefficient and badly led, the Japanese evinced a skill in fight which was as remarkable as it was unexpected. During the Great War, the Japanese navy had no great part to play but whatever it was asked to do, it did with celerity and quiet efficiency. In point of size, Japan now ranks third, with about 70 per cent of Britain's strength. But in point of capacity, she would probably equal either America or England. Her armaments are impressive and it has been proved that her gunnery is exceptionally good. Her fleet has the further advantage of being employed only near the familiar home waters, where there is no power capable of giving her a real challenge. The recent talk of " sanctions " has alarmed the Japs and given a fillip to their naval go-

getters. Japan has also to think always of the Russian menace looming practically at her door-step. This is the reason why Japan fell foul of the Washington treaty which had bound her down to an inferior naval position. Her claim to parity has been strengthened by the Anglo-German Naval Agreement. Japan realised that armaments provided no mean encouragement to heavy industries especially at a time when nations abroad were cutting at Japan's export trade and there was danger of unemployment. Naval expenditure has, therefore, recently been doubled and a special programme for four years has been drawn up with an ear-marked expenditure of £50 millions in addition to an annual expenditure of over £30 millions on the navy.

Japan's sea-dogs possess exceptional courage and discipline, which count for much in a fight on water, and are keenly alive to the great traditions of their service. Two stories may be mentioned in this connection. To ensure that torpedo attacks were not foiled by the quick manoeuvring of the targets out of the way, a Japanese commander conceived the idea of actually steering his torpedoes with men who would of course be blown to atoms, at the time of the impact, along with the projectiles. The Admiral explained the situation to his men and wanted 200 volunteers to be trained in this "suicide squad." The moment he made the call, 2,000 men stepped out of the ranks and demanded that their lives should be held in sacrifice for the benefit of the "Dai Dai Nippon." The other incident happened at Shanghai in the recent bombardment of the town. A large naval shell had landed in the cotton godown of a British factory-owner who, greatly perturbed by this dangerous visitor, consulted American, British and French army experts as to how the shell should

be removed. They all unanimously opined that the only way to render it comparatively harmless was to build a strong water tank of steel round it as it lay and to explode it in the water. Subsequently a Japanese army official was also interviewed. He agreed that the shell was an extremely dangerous one and could be destroyed only in the way mentioned. While the mill-owner was worrying himself to death over the matter, he was surprised to receive a visit from a Japanese naval lieutenant one day. The latter asked him if he had an unexploded shell on the premises and on being told that there was one in the abandoned godown, he went and quietly picked up the shell, put it under his arm and was nonchalantly sheering off, when the amazed businessman asked him how he was handling without concern an explosive considered too dangerous to be touched by even a Japanese Major. The answer promptly came: "Oh! You were dealing with the Japanese Army; I am the Japanese Navy."

The French navy is of considerable size (especially in auxiliary craft and submarines) and is reputedly of good quality. But France suffers from the disadvantage of having to protect extensive lines of communication all over the world with a somewhat inadequate fleet. Besides, the scare of an enemy landing in the north makes it necessary for her to keep a good part of her navy in her northern ports, leaving her Mediterranean strength considerably depleted. A hostile Spain will imperil her African lifeline and if the Straits of Gibraltar are blocked up, her two fleets will lose contact with each other with disastrous consequences. To remedy this disability there was a talk of cutting a canal up to the *Rhone*, but this seems to have been given up. This partly explains her solicitude for the

Spanish Reds. It may be mentioned that the projected French Naval giants will carry armour thicker (15,000 tons apiece) than that of the best protected British ship, *viz.*, H.M.S. *Hood* which carries only 13,500 tons of mail. The French navy leads the world in the quality of its flotilla leaders, the fastest of them making over 42 knots per hour.

The backbone of the Italian navy is its submarines, which appear to be profusely strewn about in the Mediterranean. The recent piracy scare revealed how easy it was for these mystery boats to ravage enemy shipping with impunity. In spite of strenuous efforts by the English and the French navy, the offending submarines could not be located and destroyed, thus revealing the great progress made of late in the construction of under-water craft, especially as regards quickness and depth in submersion, range of free action and silence in movement. The Italians even claim to have perfected air-tight steel towers for assisting damaged submarines, lying helpless at great depths, to rise to the surface. In the recent naval review off Naples, Hitler and Mussolini witnessed 92 submarines doing circus stunts under the water. The consensus of opinion among naval experts is that the Italian fleet, although small in number, is composed of modern ships of the highest quality, manned by high-grade personnel. In the event of war, it is very probable that Italy will prove a very powerful factor to contend with in the Mediterranean area.

The Bolshevist navy is an unknown factor. It is just beginning to recover from the disastrous effects of the Revolution which practically destroyed its officers.[2] Its

[2] William Carr in his book *By Guess and by God* records how the two Admirals of the Russian Baltic fleet were burnt alive by their own men before the very eyes of the British *liaison* officers.

existing ships are old and untrustworthy but the details of the projected ones are imposing. Russia's primary sorrow is that she has no port open all the year round either in Europe or in Asia. Her resources are, moreover, scattered over widely separated points, *viz.*, Vladivostok, and the Baltic seaboard, between which oceanic communication will be practically impossible in time of war. Russia, however, is reputed to have a large number of submarines and motor-torpedo boats in the Pacific, which are sure to cause trouble to Japan if hostilities break out.

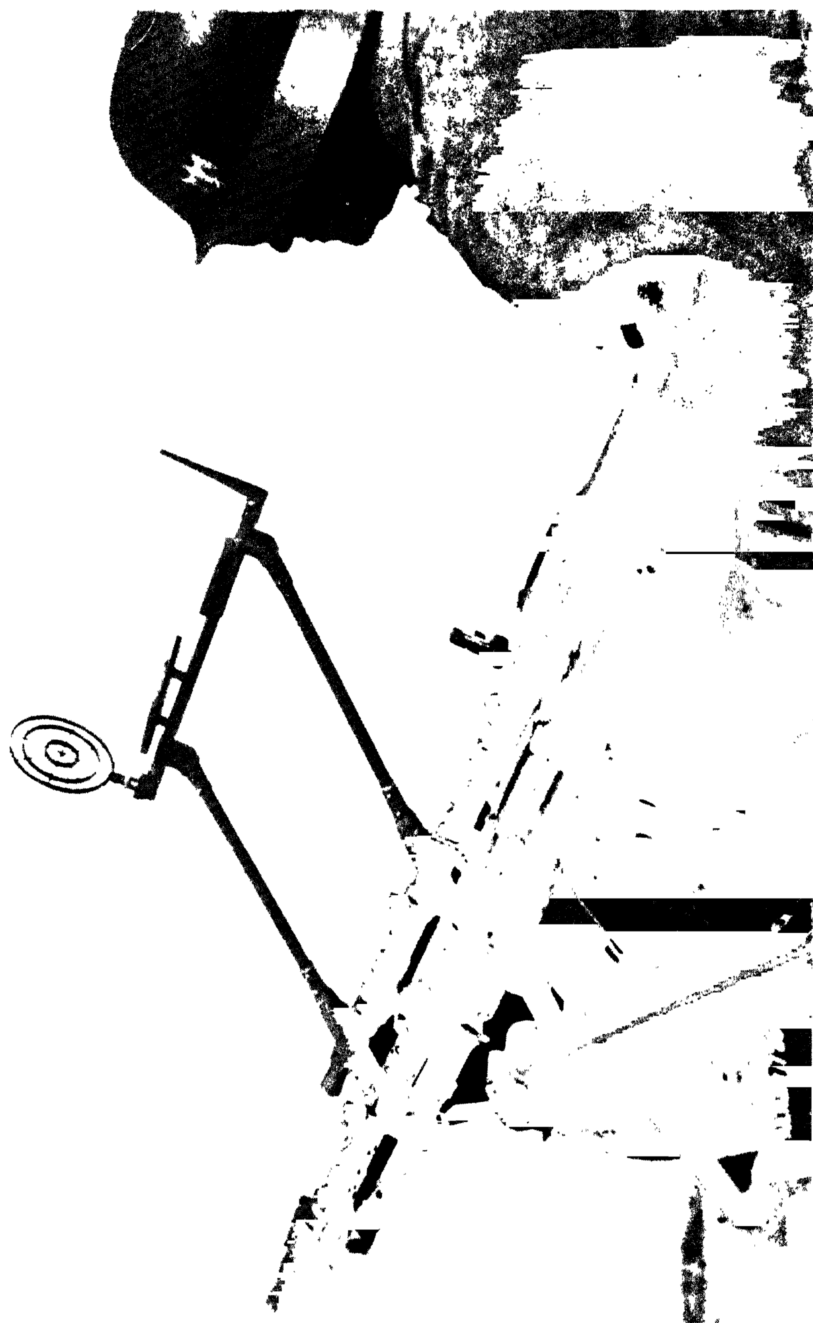
CHAPTER IV

THE MECHANISATION OF THE ARMIES

LET us take a look at the armies of the world. First among these come the German armed forces. A complete re-organisation of Germany's fighting troops has been carried out on the most modern lines by Hitler ever since the repudiation of military clauses imposed upon Germany by the Treaty of Versailles. Army service is now compulsory in Germany and it has been claimed that she can place in the fighting line five million men at a moment's notice. This claim does not appear to be extravagant, as during the last war Germany had simultaneously about three million men under the colours. The French attempt to keep her neighbour in a perpetual state of emasculation has been completely frustrated. Strict secrecy is being maintained regarding the details of recruitment, but the following points have been gathered by the French military intelligence. The German young (male and female) are given a preparatory physical training early in their life in the para-military organisations. This is followed by two years' compulsory service in the army. An excellent training reserve is to be found in the various Youth Camps, whose strength is now nearly a million strong. The regular army is divided into 18 army corps, the great part of them stationed on the western frontier. A corps is nominally composed of three divisions, each of the latter being made up of two regiments of infantry and two of artillery, a motorised engineer battalion, and an armoured train section. Besides the 54 regular divisions, there are four mechanised

divisions stationed at Weimar, Wurtzberg, Berlin and Dusseldorf. These armoured divisions individually contain about 1,000 tanks, a mobile artillery unit, a section of anti-tank artillery and an intelligence bureau. In East Prussia, on the other side of the Polish corridor, there are strong units of cavalry and infantry, whose exact numbers are not published.

Various weapons were forbidden to Germany under the Treaty of Versailles. These included tanks, aircraft and anti-aircraft weapons. All these prohibitions have now been swept away and the demilitarised zone on the other side of the Rhine has been strongly fortified. There have been recent rumours (which were confirmed at the time of the Czech crisis) of the construction of a light line of fortresses, machine-gun nests and artillery emplacements opposite the famous Maginot line. The army is highly mechanised and supplied with abundant transport so that it is even more formidable than its large size indicates. The infantry equipment consists of large numbers of heavy and light machine-guns, trench mortars and automatic rifles supplied to individual soldiers known for their marksmanship. The artillery is also mechanised in operation and transport. In fact, the reorganisation has been carried out with characteristic Teutonic thoroughness and efficiency. The German scientists are credited with having invented new instruments of offence and defence whose details are being very jealously guarded. Probably new types of poison gas have been perfected which will defy the protection of masks and spread death and suffering on a scale hitherto unknown. The German Krupp guns are among the best in the world. During the last War, these were responsible for the speedy capture of Antwerp whose defences were considered



impregnable. The German Flammen-werfer and Minnen-werfer did incalculable damage to the Allies during the war while the " heavies " were often able to drown in their ponderous roar the minor belchings of the Allied guns. It is rumoured that out-size cannon (after the model of the famous Big Berthas of the last War) able to hit a target 75 miles away have been cast at Essen Works. Seven railway systems equipped for heavy traffic at high speed, with innumerable detraining platforms converge on the Moselle-Rhine sector, with the addition of several motor roads, so that a quarter of a million men a day could be marched to the frontier without serious dislocation of arrangements. It is a noteworthy fact that in the last War, the German troop movements were carried out with great celerity, quietness and secrecy, thus aiding Germany's various *coups de main.*

The morale of the German troops is excellent and their patriotism unquestionable. Observers of the last War all pay a uniform tribute to the bravery and orderliness of the Germans, and to the skill and love of duty of their officers, especially the non-commissioned ones. During the first four years of the War, their casualties were much less than those of the Allies and their war booty—men and material—much larger. And, in spite of the fact that the odds against the fresh and growing strength of Canada and the United States became heavy, they never showed the white feather. Haig contemporaneously records that just before the Armistice, Germany was not broken in a military sense. " During the last week," he says in October 1918, " her armies have withdrawn, fighting bravely and in excellent order. Wherever you hit them they hit back hard and inflicted heavy casualties. They were being gradually pushed

back, it is true, but show none of the symptoms of a disorganised army; their retirement is effected in perfect order and is conducted with the greatest skill." Germany, who practically single-handed gave battle on two fronts to the combined armies of thirty nations for four and a half years was driven to sue for peace because of her economic paralysis, the sudden collapse of her weak allies and the tide-turning entry of the United States in support of her enemies. The lack of food and drink was beginning to tell not upon the troops which were in fairly good fettle still, but upon the civilian population whose winter of discontent was turned into a " snow storm " of revolution by insidious propaganda emanating from the Bolsheviks, the Jews, and the Allied spy service. Military historians are now inclined to think that if only Bulow had not mistakenly fallen back in 1914 before encircling Paris, or if only Ludendorf had pushed home his early 1918 thrust, the verdict of the War might have taken a different shape. Hitler remarks in his *Mein Kampf* that " the organisation and leadership of the German armies in the Great War were the greatest the world had ever seen and that the failure lay in the limits to human powers of resistance." With this opinion of a man with a good war record most critics will agree.

Germany is now smarting under a sense of national humiliation; hence her desire to wipe out the disgrace of defeat by a spectacular come-back. She considers that *weak nations have no rights,* as the peoples of Asia and Africa have too often realised. She remembers how her frontiers were violated, her coal-mines expropriated, her arms confiscated and the crowning insult of a so-called war-guilt permanently foisted upon her by a vindictive enemy who was not above breaking the agreement on which the

Armistice was signed by imposing fresh punishment upon a humbled nation. She does not forget that besides paying for the war and for an army of occupation for several long years, she had to bear on her drooping shoulders the burden of war reparations to the tune of £1400 millions. Hence her salutations to the rising sun of Nazism, which has given her a new hope, a new strength and a new life, like unto a Phœnix risen from its own ashes. Her hatred of the Soviet (whose doctrines and propaganda sapped her strength in 1918) is intense, and the fertile lands of the Ukraine will be welcome to Germany both as a price for that unkind turn and as a solution of her problem of food and ammunitions. In the not very distant future, a clash between the two Dictators, Hitler and Stalin, representing the two opposing ideologies, can be safely predicted. The last War destroyed the Czar. It is not improbable that the next one will see the end of the Soviet as it exists today. The German fortifications of the late de-militarised zone has strategic consequences of vast importance to Russia. With the fall of Czecho-slovakia, the task of Germany is now considerably simplified. It is admitted by experts, including Keynes, the Cambridge economist, that the next objective of Germany is the Ukraine with its wealth of fields and mines.[1] To

[1] Mr. J. M. Keynes, writing in the *New Statesman and Nation* a week after the Munich Pact was signed, explained the exclusion of the Soviet from all the negotiations as an earnest of French and British willingness to connive at Germany's expansion towards the Ukraine, leaving the Western half of the Continent in peace. The economic position of this piece of territory is so strong and the wealth in it so abundant that its acquisition will undoubtedly change the position of Nazi Germany almost overnight. Ukraine produces 80 per cent. of the Soviet Union's coal and anthracite; 70 per cent of its pig-iron; 50 per cent of its steel; 60 per cent of its iron ore; 85 per cent. of its sugar; 70 per cent. of its agricultural machinery and 95 per cent. of its manganese. The giant

meet the expected attack, Russia is stated to have taken special measures in the Ukraine including deforestation of large areas, to prevent enemy troops from taking shelter in them.

France until recently possessed the largest army in Europe. Her peace-time strength consists of 450,000 men in Europe, while there are some 200,000 soldiers in North Africa and other overseas possessions. The army is organised in 20 divisions of infantry and of cavalry and 5 colonial divisions. To man the famous Maginot Line consisting of subterranean fortresses, about 100,000 men are permanently employed. Thus there are two kinds of defence forces, one to repel a surprise attack and the other for prolonged campaigning under the usual war conditions. The Maginot Line, constructed at a cost of £100 millions, is watched night and day by the regular troops as mentioned above who will be supported by local reservists and by motorised units stationed near the frontier. The Home tank force consists of 10 regiments totalling 2,800 machines, of which 120 are heavy ones. The chief piece of artillery is still the famous "75" with 3″ calibre, while the field howitzer is a 4·3-inch weapon introduced in the last War. The Army rifles of Lebel make are somewhat out-of-date, but automatic fire-arms are now being issued to selected companies.

turbines of the Dnieper Dam are universally acknowledged to be the largest hydro-electric plant in Europe. At Kharkhov stands the biggest tractor plant on the Continent. In short, the Ukraine is but a fiftieth part of the Soviet Union in area, but it nurtures really a fifth of the population. A veritable granary of the Soviet, it is little wonder that the Reichsfuehrer likes often to spice his speeches with a comforting annexe: "If I had the fertile plains of the Ukraine, Germany would live in abundant wealth." A dream that might come true, now that German legions in Czecho-slovakia are within striking distance of the Ukraine.

The French soldier is noted for his dash, courage and emotional enthusiasm which qualities earned him undying fame under Napoleon. But it has been remarked that the men are somewhat easily cast down by reverses and are apt to canvass for political support when discontented. The British military critics during the War rated their worth rather low, but this compliment was repaid by the French experts in their turn. The fact remains, however, that desertions in the French rank were fairly numerous and after the disastrous counter-thrust of 1917 under General Neville, when he lost 120,000 men and his reputation, a mutiny broke out among the troops of sixteen army corps, who cried out when ordered to go over the top, "We will defend the trenches, but we won't attack." Petain, who replaced Neville, mended in some measure the broken discipline, but the sword of France, as Liddell Hart remarks, never again acquired the same sharpness which it had before Neville's foolish venture. It is significant that in the offensive of 1918, the Allies had to frequently buttress up the ebbing spirit of their troops with the fresh battalions from America and Australia. General Pershing has remarked in his Memoirs that the *morale* of the Allied troops was so low in 1917-18, as compared to that of his own men, that he was reluctant to mix up his troops with those of his colleagues and preferred to form his own independent army. It has been officially recorded, in 1916 and 1917, that the English and French Divisional Commanders repeatedly ignored orders from above for offensive operations, as they knew that these will not be carried out by the troops, who, blinded and tortured by gas, pounded by high explosives and exposed to venomous enfilading machine-gun fire, were then at the utter end of their physical resources.

France's population problem is an ominous factor in the situation. Her population will never exceed 45 millions, while that of the Germans will be nearly 80 millions after the Austrian and Sudeten Union. Moreover, there are about 5 million Germans outside the Fatherland. France, as a result of the decline of her population, has to depend more and more upon coloured troops from Morocco and West Africa, since she has no colonies of White peoples, as England has. Against international convention, she attacked the Germans with negro troops even as the English used Indians in Flanders. But the Senegalese proved rather unreliable, as in the German offensive on the Somme in 1916, they ignominiously fled from the trenches, even storming the hospital trains in their eagerness to get away. The Moroccan mercenaries are better fighting stuff, but their loyalty is uncertain in view of the rising tide of nationalism in Algeria and Morocco. In fact, in the event of a crisis in Europe, the Riffs are likely to make a bid for liberty in collusion with the Spanish Moors, across the border. Fascist Spain has created another pretty problem for La belle France. She can no longer be sure of her Iberian frontier, as General Franco is likely to make a common cause with the Fascist powers and attack the enemy in her rear, in the event of a general European war.

The British peace-time army is comparatively small and there is no compulsory military service. The total nominal strength of effective troops is 230,000 including about 60,000 in India, but there is a considerable shortage owing to lack of recruits. This deficiency which was recently in the neighbourhood of 40,000 men and officers offers a strange contrast to the situation on the Continent where soldiering is a very attractive profession, drawing the

pick of the nation's manhood. The recent campaign to enlist voluntary air-raid wardens collapsed so spectacularly that only less than 8,000 men offered themselves in place of the required 46,000 in outer London alone. Today, the peace-time German army stands at 1,000,000 men and all over the Reich, every house, factory or flat has its trained air warden. The British press keeps clamouring for active pacifists, but only passive ones seem plentiful. Remedies, like lowering the requisite standard of physical fitness for recruiting, and offering a fourth meal free, have been tried but without much success. The latest efforts have been in the direction of increasing the number of officers from the ranks and their pay and promotions, and this seems to have had some effect though it has involved much expenditure.

The army is very much scattered, the Home strength being only 120,000 and the rest being stationed in Egypt, China, Federated Malay States, Malta, Palestine and Gibraltar. As a second line of defence, there stands the territorial force which has a strength of 155,000, which figure was recently 48,000 short of the sanctioned strength. The force has two purposes to serve, *viz.*, the manning of the coastal defences and the operation of the anti-aircraft weapons in times of need. For the latter contingency, two territorial divisions have been converted into anti-aircraft units and located near the very vulnerable areas about London and the Thames. In addition, there is an Army Reserve of about 118,000 men, 13,000 below sanctioned strength.

Mechanisation has proceeded apace in the British Army. All cavalry regiments have been dehorsed. Each organised infantry battalion will have 52 light machine-guns and four motorised trench mortars, in addition to 32 Vickers

heavy machine-guns and 16 anti-tank guns. Machine-gun companies will be transported in armoured cars. The Tank corps is organised in 7 battalions of which one is in India and another in Egypt, but the total strength is not large, being only about 500 machines, which compares unfavourably with Germany's 4,000 and Russia's reputed 5,000. During the last War, the Allies used over a thousand of this weapon (in which the Germans were woefully deficient) with devastating success.

Britain's artillery strength is also low both in relation to her own infantry and as compared to the artillery strength of other powers. The total strength is about 1,000 units, consisting of Horse Artillery (13-pounders), Field Artillery (18-pounders), Medium mechanised guns (6″ howitzers or 60-pounders) and anti-aircraft mobile batteries (3″). The number at the disposal of Germans runs into several thousands. It may be remembered that in the last War, either side used nearly 10,000 pieces of artillery, some of which was of great hitting power and range, on the Western Front alone.

Of course, Britain is manufacturing heavy guns with feverish haste, but she has a good deal of lost ground to traverse. The vogue of mechanisation has led to a critical examination of the rifle as an adequate weapon. It has been contended that the machine-gun is a more useful instrument in dispersed fighting and that it can be usefully substituted for the rifle. This argument is sound so far as it goes, but the objection is that the machine-gun is not so portable and is liable to mechanical breakdown. Now a sub-machine-gun, like Thompson's, seems to be popular with the Army authorities as a compromise and the Americans are popularising it with notable success.

The British force in India consists of 43 infantry battalions and artillery (approximately 250 pieces)—a miserably inadequate allotment. There are only one anti-aircraft battery and 8 light tank companies. The British cavalry consists of 5 regiments, all of which are about to be mechanised very soon. The purely Indian army is composed of 160,000 regular sepoys and 140,000 reservists, of whom 45,000 are in the Indian State forces. There are a few cavalry regiments, but not much artillery, tanks or anti-aircraft equipment in the Indian forces.

The British weakness on land strikes all careful observers. For emergent police duties in Palestine regular troops proved unavailable and a small army corps had to be collected from the reservists. During the last War, the rapid depletion of her infantry made it extremely difficult for England to fill the trenches in her own sectors and her battalions were chronically under-strength. Early in the struggle she had to use Indian sepoys; later she had to rely on the Canadians and the Anzacs; it was only the latter troops, coupled with the supplies of men from America, who arrived at the rate of 250,000 men per month from February 1918 onwards, that enabled the Allies to weather the furious storm of German attacks and finally resume the offensive in June 1918.

About the fighting abilities of the Tommy, even German opinion is favourable. Hitler himself praises the courage and pertinacity of the British levies especially the Celtic Highlanders, while he harbours no great regard for the French conscript. General Pershing, however, considered that at the latter stages of the War, their *morale* was low as compared with that of the Americans or New Zealanders. The reasons for this deterioration are not far to seek.

When the first shots were fired, the British were buoyed up with the *élan* of enthusiasm, skilfully stimulated by propaganda. They considered that the war would be a short affair and that by the winter of 1914 they would be celebrating Christmas in Berlin. Instead they had to face the " music " for four long years, receiving a strafing from the enemy on a scale which sapped their manhood and shattered their nerves. After two years of continuous war against superior odds on two fronts, the Germans were so strongly entrenched that in the attack on the Somme in October 1916, the British lost 412,000 men (about half their army) and the French over 200,000, while the enemy casualties were 40 per cent less. " No more Sommes " became a nation-wide cry in England and this was echoed silently but none the less unmistakably by the cruelly shaken troops. The *morale* of the troops was also affected by the deep underlying distrust between the French and English High Commands. While retreating from vigorous German onslaughts, the two armies were inclined to fly apart, the French falling back on their beloved Paris, while the English converged on their coastal bases like Calais, Boulogne and Dunkirk, whence they could take boat in case of emergency. Unlike the French public, the English knew that the French victory of the Marne was largely a legend and that the Allies merely advanced over ground, which was voluntarily vacated by the Germans under Bulow, who, having outrun their artillery, were constrained to strategically retreat to their entrenched lines covered by their own guns. This was evident when the French themselves dashed in advance of their field cannon to make quick work of the supposedly demoralised Boches. They received such a prommelling from the enemy artillery and

machine-gun nests that the troops lost their appetite for the fight more or less permanently for the rest of the war. Bitter complaints were also made by the Allied Commanders at the time against each other regarding the reluctance of their respective troops to hold their ground and fight it out with the invader. This lack of co-operation and faith in high places also, in some measure, contributed to the disillusionment of the troops, whose fighting qualities were otherwise praiseworthy.

Italy has no belief in disarmament; hence her army is raised to the highest pitch of efficiency. Service is compulsory and practically begins from childhood. The permanent army is about 600,000 strong organised in 31 infantry divisions, together with three motorised divisions and a mechanised brigade. The Alpine defence is entrusted to an independent force of excellent quality and trained in mountain work. There is, besides, a sort of colonial army, drawn from Lybia, Abyssinia and Somaliland. There is apparently no lack of men. At one time the Duce boasted that he could mobilise 7 millions if necessary and this claim does not appear to be quite window-dressing. Italy maintains strong garrisons in Lybia (recently reduced at England's request) and the Somaliland, and has fortified bases at the ports of Maghadishu, Massawa, Rhodes, the Dodecanese, Sicily and Naples. As already pointed out, the geographical situation gives her a dominance in Central Mediterranean, especially since seapower under modern conditions is localised. This largely accounts for British nervousness about their eastern communications. The English realise that their imposing fleet cannot hold the same unhampered sway over the land-locked sea as before the war. The growth of air power and of submarine naviga-

tion, and the much greater potency of hidden shore batteries have robbed the capital ships of their whilom superiority at sea. The Anglo-Italian agreement is the result of a realistic cognizance of this altered situation. It is significant to notice that stipulations have been made against further fortifications in the Mediterranean by Italy in return for the keeping open, in permanent neutrality, of the Suez Canal by the English.

About the prowess of the Italian soldiers doubts have been entertained. The *débâcle* of Caparetto in the War, when a few German divisions were able to rout an Italian army of 500,000 men and take half that number prisoners, is frequently mentioned against them. Further in the Spanish War, the Italian volunteers are supposed to have failed to acquit themselves creditably on the hills of Guadalajara. There are, however, extenuating circumstances inasmuch as the defeat at Caparetto was due to a purely accidental severing of vital communications by the German cycle battalions and to a strike-work attitude on the part of the Latin soldiers themselves. At Guadalajara, it is stated, the Italian retreat was due to unexpected foul weather and to lack of support at a critical moment from German Franco. In the Abyssinian War, the Italian levies fought bravely under inhospitable conditions. Their quality may not be so good as that of the Germans or the Scots or the Moors or the Turks, but it is none the less not so inferior as interested critics make it out to be.

The United States possesses the largest cohesive population among the White powers. During the last War, the country raised by compulsory service a total of 3,707,000 men, about half of whom had been transported to France by the middle of 1918. The *morale* of the American troops

was considered by impartial observers to be superior to that of either the French or the British, although the men had to be allowed comparatively a higher standard of comfort than the other Allied troops. The A.E.F. acquitted itself very creditably in the War, whose successful termination was largely due to its vigorous and persistent advance despite heavy casualties. The experience of these men in the last War gives the United States a powerful reserve of trained personnel.

The actual peace-time strength of the country is not in excess of 200,000; but there is a National Guard, in which, if necessary, conscription can be enforced. The officers' reserve corps consists of 115,000 men and this indicates that the army can be rapidly increased in size when needed. Recently, the Japanese scare, coupled with chronic unemployment, has given a fillip to recruitment and large second-line forces are reported to have been assembled on both the sea-boards. During the last War, the American efforts were handicapped by inadequacy of transport facilities and the submarine peril; but this has now been remedied. Large troop-carriers have been built and there is besides the mercantile marine. The Navy also has been raised to the first position in the world, so that there is no difficulty about convoys.

Striding like a Colossus across Europe and Asia, stands Russia. Its armies raised by compulsion number about 2 million men, organised in 86 divisions of infantry, 21 divisions of cavalry and two mechanised corps, handling 5,000 tanks. Only professed Communists are admitted into the regular army, but behind the latter stand the vast conglomeration of irregular units of varying standards of training and efficiency. The military Commissar, Veroshilov,

boasted on one occasion that he could mobilise 13 million men, if necessary. According to the French military expert, General Weygand, the quality of the Russian troops is poor and their value has been further seriously affected by the compulsory purging of prominent generals, which must have utterly disorganised the High Command and shaken the confidence of the rank and file. Marshal Totachevesky especially was a man of considerable ability and initiative and his execution has dealt a great blow to Russian military efficiency. The spirit of the troops is also an uncertain factor. Their communist faith in many cases is probably only skin-deep and is likely to wither away in time of stress. Japan is counting on this factor in the situation in her forthcoming trial of strength in the Far East. That the Chinese War is waged at all is an indication of her belief that Russia is at present severely handicapped by the wholesale slaughter of her capable commanders. Russia's other disabilities lie in the immense distances of her sprawling empire, and in the absence of proper means of communication. She is inadequately equipped with railways and roads and her huge forces cannot be mobilised and effectively concentrated with the same quickness and secrecy with which Germany, for example, can mobilise and concentrate hers. This was proved during the last War and although there must be probably some improvement, the position is not quite satisfactory. The climate, which makes the country ice-bound for several months of the year, is another adverse factor. During the Napoleonic wars, the Czar said, at the time of the retreat from Moscow, that his best Generals were January and February. But these Generals have the dangerous tendency to turn traitors to their own country sometimes.

Mechanisation has made considerable progress in Russia. The number of tanks, as already pointed out, is large and of various patterns and sizes. Liddell-Hart believes that these machines are mechanically good and well-manned, but in the Spanish War they did not produce any spectacular results, and many more bogged and captured by General Franco. Road transport appears to be better, as large numbers of trucks are now made in the country from Ford patents. Plants for making guns and munitions have been erected and secret reserves on an enormous scale are being accumulated. The Russian High Command is making up for the lack of ingenuity of its scientists by an extensive system of espionage and patent-piracy. Probably the most wide-spread and the best subsidised, if not the most efficient, spy system in the world is being run from the Kremlin. Russia's difficulty in the future is that she will have to fight on two fronts, in contrast with the 1905 and 1914-18 struggles. About half a million of her troops are stationed in Siberia and in the event of a clash with Japan her resources in Europe will be seriously drained.

Of the smaller nations of Europe, Poland probably possesses the best professional army, which is raised by conscription and totals at present 300,000 men in five army corps. This strength can be increased in time of war to 1,200,000, and will prove a formidable menace to Russia in the event of hostilities. Next in efficiency, if not in numerical strength, will come the Czech army of about 175,000 whose quality is excellent and was further improved by an impressive line of fortifications, on the western frontier, which have now passed into German hands. Czecho-slovakia is probably the only Danubian country

which can boast of a heavy armament industry. The renowned firm of Skoda (which had close affiliations with the French concern of Schneider-Creusot) are makers of excellent tanks, guns, munitions and aircraft, which are bought by Governments all over the world. The problem of the Czechs was the problem of their minorities, but this has now been solved by the dismemberment of the old State. The Czechs, who were hitherto in a minority in their own country, thanks to an insensate recasting of their territories after the War by the nervous French politicians, are now more cohesive and united than ever before; but, as mentioned elsewhere, their political affiliations have undergone such a rapid and unexpected alteration that instead of being a formidable ally of the democracies, Czecho-slovakia has become the potential supplier of military stores to the totalitarian powers.

The Spanish Nationalist army under General Franco is now a powerful instrument of war. It is composed of nearly a million men, some of whom are foreign volunteers and Moroccan levies. Its efficiency is so remarkable that France is seriously concerned about her rear communications and is believed to be building a line of fortifications in the Pyrennees. Nationalist Spain was intended to be Fascism's answer to France's Czecho-slovakia. But the position has been radically altered by the weakening of the Czechs and their switch-over to a pro-German policy. The two countries were intended to serve as mines in the rear of the principal combatants. While the danger to Germany is now past, the threat to France is gaining force. If the Reds are finally wiped out (as appears likely, owing to their acute shortage of food) the position of France, in a future war, will be seriously jeopardised.

The Portuguese army is small and not of very good quality. In the German thrust on the Somme, they ingloriously broke away at the first skirmish, stealing even the British staff cars in their hurry to make themselves scarce. Rumania, Bulgaria and Jugoslavia have each a fair-sized standing army of about 250,000 men whose number can be multiplied rapidly in case of necessity. As already indicated, the Serbs are no longer so violently anti-fascist as they were a few years ago and their loyalty to France is more than doubtful. Turkey, a ghost of her former self, still possesses a fighting force of 200,000 men whose calibre is acknowledged on all hands to be exceptionally fine. The Turks lack, however, tanks and heavy artillery, but an attempt has been made to secure these, it is said, by large purchases from England and Germany, both of whom have given Turkey "loans" to the extent of £16 and £12½ millions respectively. In the death of Kemal Ataturk the country has lost her ablest general and her wisest statesman. But Ismet Pasha, who has succeeded him, is a fighter of no mean order, and Turkey, by her command of the Dardanelles and her general military efficiency, is still a serious factor to be reckoned with. It is no wonder, therefore, that both Britain and Germany are laying violent siege to the political affections of this country.

CHAPTER V

THE NEW INSTRUMENTS OF WAR

A brief study of the new instruments of war which have revolutionised its technique is germane to the question of national rearmament. The production of smokeless powder, the magazine rifle, the machine-gun and quick-firing artillery had completely metamorphosed warfare even before 1914, but the old army commanders, bred up in the atmosphere of Napoleon and Clausewitz, refused to imbibe the lessons of the changing conditions of war. They still believed in the mere superiority of numbers, in the necessity of mobility, and in sudden and determined attack. A French expert, General Herr, thus envisaged the war in 1914. "It will be a short one of rapid movements, a struggle between two infantries, between armies of personnel and not of material. The artillery will only be an accessory arm and the necessity for heavy artillery will seldom be felt. The obstacles to movement will seldom be great." Foch himself, bred up in the old school, represented its fallacies in a supreme manner, by insisting, in the face of stern warnings to the contrary, on massed attack and quick penetration into enemy territory. His favourite maxim was that if you were powerless to hold on, then your only alternative was to advance. With him, "to advance was to conquer," as Frederick the Great used to say, and he stressed the supreme potency of the offensive spirit which would carry everything before it. The result of his theories was a useless sacrifice of lives and the permanent damping of

the initial French enthusiasm. Even the rudiments of trench warfare were not realised by the Allied Generals, though as early as 1897, a Polish banker (M. Bloch) had predicted that future armies will have to burrow themselves into the ground and in national conflicts the spade will be as indispensable as the rifle. The soldiers may fight as they please, said Bloch, but the ultimate decision will be in the hands of Famine. The battles of the Marne and the Aisne established the vogue of entrenched warfare, each side trying to turn the flank of the other by a race to the coast. When the North Sea blocked further manoeuvres, the *rigor mortis* of the new style of conflict set in, and it was to last for four years!

The South African War had shown the great defensive power of the magazine rifle with which a smaller force, reasonably ensconced, could stop an enemy in superior strength, from advancing. The Russo-Japanese War further exemplified the utility of barbed-wire entanglements, as a means of protection, and the great holding power of field artillery. Yet the lessons of these two wars were largely ignored or misinterpreted, even when vast improvements were made with rapid-firing cannon, which could do indirect laying (*i.e.*, firing over a rise through precise "taping") and with the machine-gun, each one of which could do the work of a company of rifles. The result of these mistaken theories of war was a stalemate relieved by spasmodic resort to the proposals of the three divergent schools of Allied strategy,—*viz.*, the Western Front School, which would destroy Germany in Flanders; the Eastern Front School, which would stab the Central powers from the rear; and the School of Slow Attrition, which would starve out the enemy through land and sea blockade.

The failure of concentrated infantry attack and the signal effect of artillery on military tactics ushered in the era of great artillery duels, in which foot troops crawled behind a hurricane of shells and merely collected prisoners or occupied abandoned trenches without opposition. The demoralising effect of concentrated artillery attack on infantry is stupendous, though the actual gain in territory may be negligible. It is on record that, in the battle of the Somme, the Allies fired two million shells in a sort of rolling barrage, the primary objective being the zone of the enemy's guns. In the attack on Arras, in February 1917, some 270,000 shells were discharged. In the great battle of Messines, there was assembled the greatest array of artillery known in history. The British artillery strength alone was 120,000 men and officers. The bombardment lasted 19 days and used up 320 train loads of ammunition, each train load weighing approximately 400 tons. The number of missiles fired is estimated at the enormous figure of 4,283,000, weighing 128,000 tons in all. Yet, this great attack resulted in the capture of only about 45 sq. miles, at a cost of 9000 men and £2 millions per sq. mile. The third battle of the Ypres was the last of the artillery engagements, as by this time it had been established that the spade had defeated the gun. Elementary calculations, based upon these experiences, showed that for a determined attack and effective penetration of enemy lines, such a large number of troops had to be employed that normally all attacks were failures, so far as the main objective was concerned.

Meanwhile a new agent of destruction of an infinite power was being evolved. This was the poison gas of various types. Cannon merely destroyed trenches and perhaps killed men, but gas destroyed with a surety that

did not call for any accuracy of aim. The gas-mask was the answer to the gas-shell, and since both sides were handicapped by the use of clumsy masks, the effect of gas in the long run was neutralised. The third important aid to infantry was the tank—an English invention and essentially a weapon of offence, which, however, was not used by the British in sufficient number or determination to force a result. Recently, the anti-tank contrivances have been made effective and the tanks were not very successful in Spain or in Abyssinia. They are useless in hilly or boggy country and consequently can be used only under great limitations. But it must be conceded that a combatant well equipped with tanks is likely to score heavily against one less favoured with this type of arms. The light tanks and armoured cars have now practically replaced the cavalry in attack and greatly added to the mobility of troops. Even before the Armistice of 1918, the Allies had prepared an elaborate plan of attack by fast-moving tanks on the German front, on the model found successful against the Turks at Meggiddo, near Damascus. A large part of the rapid Japanese advance on Hankow was due to the efficient use of tanks and armoured cars. In the lightning capture of Canton, so brilliantly conceived and executed, the same weapons played a very vital part, thus once again demonstrating the superiority of highly mechanised troops over a larger but primitively equipped enemy.

It must be admitted, however, that after the cessation of the War, military theory turned a somersault and allotted to the tanks a subordinate place. Attention was diverted to new methods of warfare which while brutal in themselves would still limit and humanise war. The German School believes that the more frightful and wholesale the initial

methods of attack are, the more conducive to the reduction of national suffering and loss of life they ultimately become. Gas, for example, they consider as a humanising agent since it disables without killing and causes insensibility without wounding. To send a city to sleep, according to this school, is preferable to wiping it out of existence. The more rapid and frightful the war, the less suffering and economic destruction would it entail. To this end, modern tacticians would concentrate on the civilian populations, who are all but totally disarmed and whose nerves can be paralysed by fear. To meet the menace arising out of this plan of attack the armies of the future should be required to protect the rear or home services, with thoroughness and rapidity before the enemy air attack can materialise.

Much learned discussion has taken place between military bigwigs on the question, whether modern conditions of warfare favour defence or attack. As already pointed out, the machine-gun and the quick-firing artillery make defence superior to attack, where the forces are more or less equally balanced. The tank and the armoured car to a certain extent have added point and strength to attack but anti-tank devices appear to have caught up with the weapon. General Fuller holds that the tank, if properly developed and utilised with well-placed artillery, can still overcome resistance. Liddell-Hart, on the contrary, thinks that the last word is still with the defenders, granting that they are well entrenched, and adequately supported by machine-guns, cannon, and gas protection. He makes one exception, however, in favour of successful attack, when he grants that if the element of surprise is properly exploited as was done by the Germans in 1917 and 1918, extensive advances can



German soldiers working an anti-tank gun.

be made even over strongly protected terrain. The aeroplane has introduced a new element of complication whose effects are still only insufficiently tested. The future alone can tell whether the aerial three-dimensional warfare has altered the military situation which led to the stalemate of the Flanders trenches for four and half years. It is evident, however, that where mechanical aids to international duels are unevenly distributed as has been the case in the Abyssinian and Chinese wars, the territory of the weaker nation can be speedily and effectively overrun and retained, by numerically inferior troops. There is no doubt, moreover, and the bulk of expert opinion is of the view, that the aeroplane, by the preponderance which it gives to attack has altered completely the strategy and even the politics of war. As Major Bratt (a Swedish expert) observes, it is the supremacy in the air which will decide the issue of a European war and the possession of such a supremacy is the same thing as military supremacy.

On the subject of the technique of future warfare, the views of Stephen Possony are of some importance. In his interesting work, *Tomorrow's War*, he controverts certain popular opinions on the subject of aerial and mechanised warfare. Distinguishing between a war economy (the military organisation of a country during peace-time in anticipation of war) and the economy of war (the actual economics of running a war), he tries to prove that through its very complexity, and economic and physical strain, a modern war between equals cannot last long and will end in the crack-up of both the victor and the vanquished. The figures, which he piles up in his above book, are most impressive as well as somewhat sensational. For example, for a war extending over a 1000 kilo-metre front (about

700 miles), he estimates the following requirements for defence and attack respectively:—

Weapons		Strength required at moment of attack.		Annual requirements (Strength + loss in 12 months)	
		Defence	Offensive	Defence	Offensive
Machine-guns	...	80,000	100,000	160,000	200,000
Guns	...	15,000	23,000	30,000	45,000
Anti-tank guns	...	8,000	16,000	15,000	30,000
Anti-aircraft guns	...	25,000	25,000	38,000	50,000
Armoured cars	...	13,000	40,000	25,000	120,000
Observation and defence planes	...	11,000	31,000	28,000	85,000
Bombing planes	...	5,000	22,000	15,000	65,000

As regards the human element, he estimates that 3 million active men would be required for defence (on a 1000 kilo-metre front) and double that number for an offensive. If the air-force personnel is included, the figures will be five and half millions and six and half millions respectively. As regards, the non-combatant and industrial personnel required to feed this army, his figures are 52 millions and 82 millions respectively. These breath-taking figures, Possony assures us, are conservative. His conclusion is that their very magnitude should damp all enthusiasm for war on both sides of the European Camp. It must be said, however, Possony is postulating an "ideal" war fought on an imaginary 1000 kilo-metre front, by *two equal* parties only, under European conditions, where frontiers are not determined by Nature. The application of his figures to a country like India must be made very cautiously.

His opinions on aerial warfare radically differ from those of General Douhet whose book, *The War in 19—*, creat-

ed a sensation some time ago and who is acknowledgedly one of the best international experts in the science of war. Possony thinks that the strategy of destruction visualised by Douhet will not be so effective as the strategy of attrition practised in the last War and advocated by Marshal Blumenthal as the mainstay of the next one. The German writer, unlike General Douhet, does not rate the destructive effects of the heavy bombers very high. He admits that, as conceived by Douhet, the next war will be a " total war " not in the sense that it will really hit the whole of the enemy country, but in the sense that it will mobilise all the country's forces. He observes further that " the effect of modern warfare remains far behind the intention, and the gap between idea and reality means that, in future wars, a rapid and decisive victory is impossible, where the opponents dispose of equal economic and moral strength; in other words, that the advantage will continue to be with the defensive, and blockade must be considered the chief weapon." He, like Liddell-Hart, concedes the element of surprise to hitting power, but believes that this will play only a large but not necessarily a conclusive part in the next war.

While proper weight should be given to the opinion of such an obviously well-informed writer like Herr Possony, it still remains an open question whether offensive aerial warfare, by its destructive effect on the centres of production and transport and the morale of the civilian population, would not, on the balance, be more conducive to ultimate victory than to that of mere passive blockade. If Possony were correct, England, which cannot be attacked from land, need not feel so nervous as she was in last September. Possony also seems to have missed the really epoch-making

discoveries achieved by the Germans in the shape of new lethal gases and potent high explosives. Further, the successful German experiments in autarchy and the possibility of friendly allies supplying the necessaries of life have robbed economic blockade of much of its terror and no nation which is awake to its responsibilities can be easily beaten to its knees by such blockade alone. The speed, range and capacity of bombers have all been improved beyond the recognition of those whose experiences are confined to the last war. For example, in 1918 the active range of a bomber was only a few hundred miles and it could not rise over 15,000 feet with load. Today, the long-distance record for loaded bombers is 3,000 miles and they can reach an altitude of 25,000 feet; while unweighted they can fly 7,000 miles at a stretch and rise to 30,000 feet. Too much emphasis cannot be laid on the fact, moreover, that the defensive capacity of a nation is just equal to its reproductivity in a military sense. If a successful surprise enemy raid or sabotage puts out of commission the prominent factories, the defences of a nation will be, momentarily at least, seriously paralysed. In the English air exercises conducted recently (August 1938), which were called off owing to large casualties due to bad weather, it was reported that the " enemy " bombers broke through no less than thirteen times, despite the most furious barrage and counter-attack, and reached their objectives with disastrous results. This shows that with an extremely mobile and adaptable weapon like the aeroplane the offensive can outpace the defence. It is obvious, however, that the anti-Douhet school has wide adherents in England, where the prevailing military opinion seems to believe in a policy of efficient defence at home, coupled with an economic blockade of the enemy, and

a minimum commitment in the land warfare abroad. This will probably leave France to shoulder the task of stemming the German tide of invasion, and with the Maginot Line it is believed she will be able to face this task singlehanded.

Strangely enough, Possony believes in the balloon barrage scheme so dear to the hearts of the Londoners. He even thinks that the gas bags may be replaced by hovering helicopters which will carry the steel spider's web of wires to catch the enemy fire-flies. This idea is somewhat fantastic, since enemy attack will most probably come by surprise and there will be no time for the helicopters to take to the air. Moreover, in view of the recent German invention of wire-cutting planes, the net barrage might become a useless and delusive weapon of defence. Possony is right when he discounts the offensive value of artillery, however, owing to the great cost incurred in blowing vast quantities of ammunition and the alternative provided by deep dug-outs for negativing damage.

Before concluding this Chapter, it may be as well to point out that the foregoing remarks will generally apply only to combatants who are more or less equally matched. Where the disparity is great, as in the Abyssinian and Chinese wars, the superiority in mechanical equipment will prove decisive even from the very early stages of the struggle. The moral for India is that India's air arm must be strengthened so as to offer effective resistance to attacking planes; for, it seems certain that the issue will have to be first decided in the air.

CHAPTER VI

THE WARRING CAMPS OF THE WORLD

A study of the relative strength of the world's fighting forces heightens our interest in the possible national alignments in the event of war. That war is inevitable and that too in the not very distant future cannot be seriously denied, in spite of the peace pacts which have come in such quick succession after the Munich Agreement.[1] The race for armaments has been proceeding in a vicious circle, each nation whetting its appetite for more armaments in direct ratio with the achievements of its nearest potential rivals and this race is the surest guarantee of war. The League of Nations has been already discredited, as being, in the words of the British Prime Minister, "lame, decrepit and untrustworthy." Earlier pacts and agreements, like the Kellogg and Locarno Pacts, are now a dead letter and even the pretence of universal disarmament has been given up. The makebelieve of international goodwill, peace and righteousness is no longer paraded for the admiration of a gullible public. The pious theories of the last War are now well exploded. The world has *not* been made safe for democracy. The Allies did not enter the War to protect the neutrality of a weak neighbour; for, they later on in the course of their struggle, readily violated the soil of

[1] Two representative opinions can be cited in this connection. Minister Pirow of South Africa declared in December, 1938, that the outlook for peace was never so gloomy as then. The United States Ambassador to England, Mr. Kennedy, said the same thing, when he gave an interview to pressmen on his return to his post after a holiday.

Greece and fomented trouble in that luckless kingdom. The last War was definitely due to the rising commercial and naval rivalry between the leading powers, and to the German interference in Egypt and Morocco—two areas which were vital to British interests in the Mediterranean. The Belgian invasion was a mere excuse. Even if Germany had left Belgium sacredly alone, England could not have kept out of the War. She could not see France smitten and humbled by an all-powerful Kaiser (as in 1870). It is a well-known fact that military consultations always portend active assistance in the event of war. In the critical days of July 1914, the war-gods of France and England had so arranged matters that English neutrality was virtually impossible. In the French Plan XVII, under which Germany was to be invaded and beaten on her own soil, the British were definitely allotted their place of battle by the side of the French, irrespective of the Belgian invasion. The same sort of conversations are going on today and they surely foreshadow a close collaboration between the two nations in the next war.

In Germany, there is an apotheosis of physical might coupled with exaggerated racial exclusiveness. Italy is trying to revive the glories of pagan Rome through an aggressive militarism; and loud-voiced Russia is sprawling like a giant over Eastern Europe, keeping the neighbouring Chancelleries jumpy and tense by periodical laudations of its own terrible prowess in war. France is slowly and silently arming herself to the teeth, building well-nigh impregnable sub-terranean refuges along her contentious eastern boundary. England, confident of her naval might ("Britannia rules the waves") and her insular position, was apparently caught napping a little. The shock came when

during the height of the Abyssinian crisis, Mussolini let England see, as if by accident, the plans he had made to blow up London from the air. The result has been a most frantic endeavour to make up the deficiency in air equipment. Britain now is spending by far the largest amount ever disbursed by one nation in peace time on armaments. Her ordinary expenditure on defence services is currently about £200 millions a year and her special outlay from borrowed money is about twice this amount.

From " disarming " for peace, the nations are now advertised as " arming " for peace. Europe is like a gunpowder magazine today ready to go up in a mighty explosion at the slightest spark. A new generation has arisen in Germany, Russia and Italy, which has forgotten the horrors of the last War. The pacific mentality is everywhere at a discount, and literature, art and science are all tinged with a martial bias in European countries. Germany, in particular, as Ludwig pointed out recently, is not satisfied with tearing to pieces the ignominious Treaty of Versailles. She wants to wipe out the humiliation of the last defeat by staging spectacular victories in a new conflict. France, on the contrary, while nervous of a fight, is doggedly preparing for the Armageddon, knowing full well that a renascent Germany with Hitler at her head will not easily forget her craving for *revanche*.

Great Britain, however, has been showing evidence of a change of international policy. Shortly after the " Hang the Kaiser " election campaign, a revulsion of feeling set in among the people, who began to doubt whether the detested Hun was such an unmixed evil as he had been made out to be. Gradually feelings softened, especially when the truth regarding the discipline, pertinacity and courage

shown by the German soldiers and civilians was more freely realised. The positive hatred of the late enemies, which was the immediate aftermath of the War, gave place to the realisation of the horrors of all war. Literature and art, the theatre and the silver screen, no more resounded with the jingling of the spur and the rattling of the sabre. Later, moreover, when the knaveries of politicians and war-profiteers emerged into the lime-light of publicity, a wave of despondent-*cum*-indignant pacifism swept the country. Authors like Keynes, Arlington, Saint-Mandé, Blunden and "Private Smith" wrote with vitriolic antipathy and bitterness of the "war to end war" and of the Treaty of Versailles. The youth and intelligentzia seemed to think that the politicians and the merchants of death had conspired to make a horrible sacrifice of the bravest and the best of the nation at the altar of their limitless ego and cupidity. The Labour Party officially denounced the war spirit and the "bloody traffic." The Oxford Union pledged itself to a resolution "to draw the sword no more for King or Country." The disabled veterans of war, many of whom were mere boys bundled from their schools into the army trucks as compressed fodder for the German cannon, felt cruelly disillusioned and critical of war-mongers. A younger generation had meanwhile grown up in an atmosphere to which the hatred of the Boche was a stranger. The cry for peace and disarmament gathered strength and soon reverberated through the country. Navy building was slowed down and recruitment decelerated. The Singapore base was practically abandoned and an era of peace and multi-lateral treaties and conferences was ushered in, with Ramsay Macdonald rolling his r's and his eyes in mock heroics. It looked as if England would wed herself to a

life of peace and goodwill which would beat swords into plough-shares and spears into pruning-hooks, and which would close the temples of double-faced Janus for ever.

But, alas for the pacifists! The spirit of Mars appears to possess the soul of the world again. So long as Germany was weak, divided and economically impotent, and so long as Italy was content to play second fiddle—though with occasional false notes—to France, Englishmen sat down quietly to their dinners, watched the stocks rise, and felt happy and peaceful. But when Germany turned Nazi, began to arm, occupied the Rhine valley and strengthened its frontiers, England's placidity was first replaced by an indulgent interest in a downtrodden nation, and then gradually by increasing uneasiness. The failure of the Washington Conference and the Sino-Japanese war of 1932 alarmed her in regard to her far-eastern interests. The rising strength of Italy in the Mediterranean first excited curiosity, then became a subject of post-prandial joking but finally became a matter of serious concern. Germany struck an ominous note by demanding her colonies and the return of fellow-Germans outside the Reich on a territorial basis. Italy embarked on her Abyssinian adventure, gravely undermining British reputation and imperilling Britain's communications in the East. The application of sanctions acerbated feelings which were not exactly softened by unrestrained fulminations in the press in both countries. The easy conquest of Manchukuo opened European eyes to the full possibilities of Japanese aggression. England no longer felt herself safe in her insular strength. The Labour Government fell in a suspicion of having struck with Moscow Reds and of having neglected the defences of the country. The new Coalition Government promptly scrapped the

Disarmament Conference and revived the Singapore "base." The lapse of the Washington Treaty was the signal for a large-scale naval building, the tempo of whose progress has been considerably accelerated in recent years. When her £1500 million programme is completed, England hopes to possess not only the biggest navy but also the greatest air force in the world.

This bellicose spirit has a simultaneous reaction upon the rank and file of the people. Recently a Bishop spoke warmly in favour of a "good honest war." The Socialists, who were pacifically inclined in the 'twenties, are now all agog about trying conclusions with the execrated totalitarian powers. Abetted by the Jewish press and the ever vigilant merchants of death, the masses have developed a socio-political antipathy towards the Fascist States upon whom they heap contumely for supposed lack of political liberty. This ideological war is not without its humorous side. It is pointed out in return by the Fascists that Mussolini is probably more popular in his country than any elected Prime Minister and that 98 per cent of the German people voted for Hitler in the famous plebiscite. The Germans reason that the Fascist dictatorship is as much a government by popular consent as any democratic régime. Against the tall British claim of liberty, equality and fraternity, the Germans point out how of a population of over 460 millions in the British Empire nearly 400 millions do not possess these very elementary rights of humanity. The political pretensions of England appear to them no better than those ancient Athens, which posed as the perfect democracy in the ancient world, though in reality her full political development was only possible through the existence of four slaves for each Athenian citizen. On the same reasoning, say the

Germans, the British Empire should be a still more "efficient" democracy, since each Britisher has eight human chattel to serve his economic and political needs. Americans grow red in the face, when anyone impugns their democratic credentials. Yet, as the Japanese delight in emphasising, of the 12 million negroes in God's own country, the only ones who are allowed to be present in the Congress of 700 members, are the door porters!

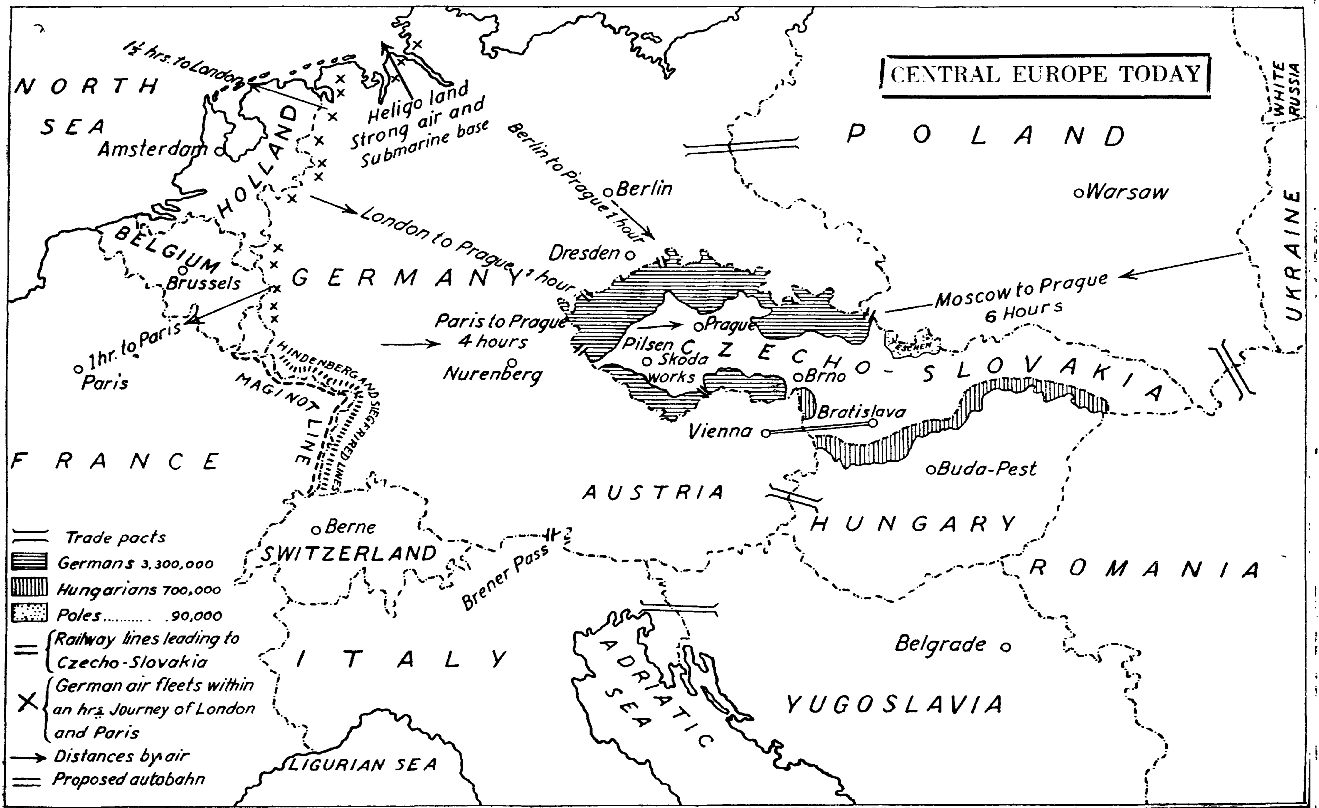
That there will be a major struggle in the near future no serious student of international politics denies now. When it is most likely to occur and what will be its *modus operandi*—these questions are discussed elsewhere. In the INTRODUCTION, the question of the possible alignment of contending parties has already been discussed in relation to the major powers. This question is one of supreme importance to India, as it will indicate *the direction from which the greatest danger of attack is likely to emerge.* In the recent Czech crisis, one of the most interesting side-lights obtainable was in regard to India's attitude in the event of a world war. That Indians have not clearly thought out this question is obvious from the very uncertain position taken up by some of our leaders. One school of thought believes that India should refuse to be dragged into an imperialistic war or help Britain to maintain her hegemony in international politics. Another school thinks in terms of a civil disobedience movement as a short-cut to *swaraj*. A third school adheres to the view that India's interests would be best served by India's siding with the Soviet and socio-democratic nations (like Spain, China, etc.). The author of this book is inclined to regard all these three views with distrust. He thinks that the only touch-stone of our national policy should be India's *own* immediate and

ultimate interests and not any slogans and sentiments howsoever dear these might be to some of us. It is one of the important theses of this book that India cannot commit a sadder or a more serious mistake than (1) to allow the ambitious, totalitarian States to prey and to prosper upon weaker nations including herself,—so much to nihilism,—or (2) to secede from a crumbling British Empire to fall an easy prey to those States,—so much to civil disobedience,—or (3) to fight for the Holy Grail of the "international sector"—this much to Leninism,—except to the extent that it might also help us on the "national" sector, the sector of future independence. It is the *raison d'être* of this work to point out that statesmanship lies in strengthening ourselves within the four corners of our constitutional powers, within the "bracket" of British supremacy (which protects us today from violation), and in making common cause with Britain—albeit a weakened Britain—to save ourselves from another long era of political submission (which is a certainty, outside British control), and in leaving the future to take care of itself.

Turning, then, to the question of alignments, the present world situation is such that each nation has to stand up and declare its allegiance. It is true that there are countries like Switzerland, Holland, Denmark, Sweden and Norway, pledged to permanent neutrality. Belgium also has announced her neutrality and absolved herself from her classic rôle of the shock-absorber of the entente Allies. The neutrality of these countries has been ratified in the recent Oslo Convention where seven North European powers declared their eternal pacifism. In spite of the German population in Switzerland and Holland, Hitler is not likely to violate the neutrality of these countries, as no military

necessity is evident. The Belgian King is now matrimonially allied to the Italian throne and as such is likely to remain neutral in the event of war between Britain and Italy. The line of division has to be found in the Rome-Berlin axis which automatically divides Europe into two warring camps. All countries, where socialist and democratic influences are strong are likely to range themselves against the Dictators. Stalin is an exception. Though there is less real liberty in Russia than in either Italy or Germany (as was recently pointed out in a *Labour* manifesto in England) and though communism of the Soviet brand has fallen short of the Marxian ideals, still Russian diplomacy (ably propagated by Maxim Litvinoff) finds ready response in countries like France and England, and, to a less extent, America. The secret understanding between France and Russia makes the latter the ally of England. Although British Conservatives have not fully reconciled themselves to either Russian doctrines or methods, yet they or the British press do not now pillory Russia as of old; and the working classes are frankly friendly. The necessities of "balance of power" demand recognition of Russia as an asset and an ally.

Czechoslovakia has become the grave of French hopes and diplomatic aspirations. The elaborate edifice of collective security so painfully built up by France has collapsed like a house of cards. The Munich Agreement has been a great bloodless victory for Hitler, as it has, at one stroke, solved his most pressing problems connected with Germany's eastern defences. The famous Sudeten Maginot Line, constructed by the Czechs at a cost of £50 millions is now in his hands. His artillery is within 25 miles of Prague, 7 miles of Pilsen and 5 miles of Byrno. He has obtained an economic stranglehold on the Bohemian


CENTRAL EUROPE TODAY
NORTH SEA
Amsterdam
1½ hrs. to London
Heligo land
Strong air and Submarine base
HOLLAND
BELGIUM
Brussels
1hr. to Paris
Paris
FRANCE
GERMANY
London to Prague 2 hour
Berlin to Prague 1 hour
Berlin
Dresden
Paris to Prague 4 hours
Nurenberg
HINDENBERG AND SIEGFRIRED LINES
MAGINOT LINE
POLAND
Warsaw
WHITE RUSSIA
UKRAINE
Moscow to Prague 6 Hours
Prague
Pilsen
Skoda works
CZECHO-SLOVAKIA
TESCHEN
Brno
Bratislava
Vienna
Buda-Pest
AUSTRIA
HUNGARY
ROMANIA
Berne
SWITZERLAND
Brener Pass
ITALY
ADRIATIC SEA
YUGOSLAVIA
Belgrade
LIGURIAN SEA
Trade pacts
Germans 3,300,000
Hungarians 700,000
Poles 90,000
Railway lines leading to Czecho-Slovakia
German air fleets within an hrs. Journey of London and Paris
Distances by air
Proposed autobahn

NOTES ON MAP "CENTRAL EUROPE TO-DAY"

This map reveals the situation after the dismemberment of Czecho-Slovakia and shows the areas handed over to Germany, Hungary and Poland respectively. It indicates how tightly Germany holds Bohemia in its grip, both economically and strategically. This explains the great changes in Czecho-Slovakia's foreign policy. The proposed road from Vienna to Bratislava, which will be ultimately extended to Rithuania, is also indicated. The map also shows the position of the Maginot and the Siegfried Lines guarding the Franco-German frontier on either side. It also shows the location of the German air-fields in northern and western Germany, within easy reach of Paris and London. The map also indicates approximately the distances by air between the various important cities in Central Europe.

areas especially since the partial control of the Czech railways passed into German hands and the Danubian waterways into that of Hungary. The Munich Agreement has radically metamorphosed Czech politics. Instead of being anti-German, the Bohemians are now actually looking towards Germany for protection and assistance. They have welcomed German propaganda and support in the Hungarian dispute. They have removed the ban on *Mein Kampf* and various Nazi papers. They have abolished Communism in the State and dissolved the obstructive Socialist parties. Decrees have been issued against the Jews and there is talk of a denunciation of the pact with Russia and France. German language has been made compulsory in Czech schools and French is now cold-shouldered. The use of English and French names in streets and hotels is severely discouraged, and there is a growing feeling of inevitable oneness with Nazidom. The recent announcement of a motor road from Vienna to Bratislava (on a German pattern and possibly under German supervision) is extremely significant as it has long been Hitler's ambition to march into the Ukraine at the head of a victorious, mechanised army. Everything points to a speedy *detente* between Germany and Czechoslovakia and it may not be unsafe to predict that in the near future there will be such a close economic and political accord between the two countries that it will be scarcely distinguishable from a military alliance. In fact, the time is not too remote when the democratic press, which is now indulging in dithyrambic praise of Bohemian democracy, will be decrying the Czechs for their total conversion to Hitlerism. The exit of Dr. Benes and the growing autocracy of the administration are sure indications of the direction in which the wind is blowing. The

Agrarian party, the largest political organisation in Bohemia, and the Sokolists have both taken measures against the Jews and thus already indicated a preference for a system of government based on German models. Signor Gayda recently stated in his paper, that Dr. Chaulkovsky, the new Czech Foreign Minister, had assured Italy and Germany that his foreign policy would be closely attuned to that of his two great neighbours and protectors. M. Béron, the new Premier, has expressed himself in the same fashion.

The importance of the Czech crisis to world affairs can scarcely be exaggerated. The Munich Agreement is both a portent and an *exposé*. It has unmistakably indicated the enormous strides in international importance which have been made by Hitler's Germany, thanks mainly to her aerial power and artillery. Colonel Lindberg, who recently visited England, Russia and Germany, is reported to have stated to the British and American Governments that the German air fleet was superior to those of France, England and Russia put together. This expert opinion had such a profound influence on English and French official opinion that the question of an immediate war was practically shelved as an impracticable proposition. The German defences in the west, consisting of lines of tank-traps, spiked rail-facings and concrete pillars, are admitted even by neutral observers as being of an unusually effective, though comparatively inexpensive, character. Even today, 30,000 men are busy with the extension of these defences and the lay-out of good motor roads, which will prevent that type of transport congestion as occurred at the time of the drive against Austria.

The Munich crisis also exposed various unsuspected

factors in the disquieting international military situation. The figment of an overwhelming Russian aerial strength, almost apotheosized by Mr. W. T. Stead and M. Pierre Cot, was rudely shattered. The English weakness in the air was also unmistakably demonstrated. Mr. Eady, the head of the civilian A. R. P. organisation, publicly denounced the deficiencies in the A. R. P. arrangements and described the Government instructions on air defence as the sloppiest ever issued by a public department. The Munich crisis revealed an almost complete breakdown in some of the British arrangements. Gas-masks were issued without the essential parts (*e.g.*, chemicals) and without proper fittings. A large number of children were moved out of the cities but no proper arrangements were made for billetting them. Over 80 million gunnybags were so suddenly ordered that profiteers raised their price from a shilling and a half to ten shillings per unit. Most of the cities were without anti-aircraft guns and chemical fire-fighting equipment. Trenches were dug in a hurry but they were so pitifully inadequate that they only evoked derision. All these shortcomings created a storm of protest in and out of Parliament, with the consequence that a new minister (Sir J. Anderson) was appointed to deal with civilian air defence for the future.

Turning to the other smaller States of Europe, Poland has undergone much clarification recently in her foreign politics. Till Pilsudski's death, French influence was strong in this country and there were constant bickerings with Germany over Danzig and the Corridor. Recently, however, Hitler seems to have stolen a march on his French rivals and to have executed a treaty of friendship. He could claim some kinship in political methods with the Polish powers-that-be, as Poland has been definitely non-democratic ever

since Pilsudski called his Parliament a "prostitute" and drove the deputies pell-mell to their homes. The army caucus, headed by the able Marshall Snegly Rytz now rules the country and seems to have established some sort of an *entente* with the Fascists. The Danzig question has been apparently settled and, as regards the Corridor, some sort of an understanding, by which Poland will carve out a seaboard out of her northern neighbours, *viz.*, Lithuania and Esthonia, appears to have been reached with Germany. The Russian menace is Poland's nightmare and she has not forgotten the hard knocks which the Soviet dealt her in the past. The Czech crisis clearly revealed the anti-Commintern leanings of Poland and gave a final quietus to whatever hopes the western democracies might have centred on her.

Poland ought to be friendly with France and England to whom she owes her existence and a great part of her industrial capital. But her pro-fascist leaning today is profound, owing largely to the vexatious question of the Poles outside their national border and of the Jews inside Poland. The Poles are to be found in Lithuania, Rumania and Russia; except in Germany, they are everywhere unhappy. The growing tension between Russia and Poland is primarily due to the oppression by the Soviet of the Poles in the Ukraine. This estrangement flamed up, when Poland proposed recently to attack Lithuania, but was stopped from doing so by a fierce threat from Moscow. In retaliation, Poland mobilised her armies when, a few months ago, the Soviet Government rattled its sabre to encourage the Bohemians in their stand against the Sudeten Germans. There is a non-aggression-*cum*-trade pact between Poland and Germany and the Polish foreign minister, Colonel Beck,

has been arranging some sort of a Baltic League to ensure peace among his northern neighbours and to keep the Reds from the Baltic Sea. But a deep-seated distrust of the Russian Bear is an obsession with the Polish statesmen. Therefore, in the event of a war between Russia and Germany, it is very likely that Poland will side with Germany. The attempt at erecting a common frontier with Hungary is sure evidence of the anti-Russian trends in Polish politics and, as recently boasted by Dr. Goebbels, it is very likely that the Poles have merged their foreign policy in that of Germany.[2]

As regards Jugoslavia, the murder of her late King at Marseilles has ruined the hopes which France pinned on her. The old bitterness over the conquest of Fiume by Italy appears to have worn off and signs of a new *rapprochement* between the two countries are not wanting; and it can be expected that Jugoslavia can be persuaded to be a mere spectator in the next duel between the European

[2] Recently there have been reports about a German plan to set up the Ukranians in Poland and Russia against their respective rulers. This seems probable as it has always been part of German strategy to create in Mittel-Europa an independent Ukranian State bound to the Fatherland by close political and cultural ties. It may be remembered how after the treaty of Brest-Litovsk (between the Central Powers and Bolshevik Russia concluded in March, 1918), the whole of the Ukraine was ceded to Germany. As Wheeler Bennett observes, this treaty is, " for a peace of humiliation without a precedent in modern history . . . . . Russia lost a territory nearly as large as Austria-Hungary and Turkey combined: 56 million inhabitants, or 32% of the whole Russian population; a third of her Railways; 73% of her iron and 89% of her coal production; and over 5000 factories, mills, distilleries and refineries." The Russian Ukraine is the richest part of Eastern Europe and the people, who are mostly either Catholic or Greek Orthodox in religion, are bitterly opposed to the irreligious Soviet and are kept under check only by a policy of repression, which results in hundreds of executions every year.

nations, even if she does not actively assist the Central Powers. Italy has nursed her back into a friendly understanding which was sealed by a treaty alliance some time ago. It is improbable, therefore, that Belgrade will ever join issue with Rome, seeing that the latter can overwhelm her territory in the twinkling of an eye. The rôle of Jugoslavia will be, if she does not join the Italians, to place a cushion of neutrality between Italy and her enemies in the east and to see that the Adriatic waters are kept free of hostile craft. It is significant, moreover, that Herr Funk has been able to conclude a trade pact with Jugoslavia which he referred to as a "political friend." Recent tendencies in domestic politics in this country reveal a swing towards fascism.

Rumania has been France's traditional ally and is an active member of the Little Entente, but recently a strong fascist faction has arisen which even could assume control of the Government under Goga. His downfall and recent death have revived anti-fascist aspirations, but his Iron Guards are still a power and may well throw Rumania into the arms of Germany at a critical moment, although their leader, Codreaneau, is dead. It is, however, evident that there is a conflict of policies, especially after English bankers began to pay court to Rumanian Big Business. It is difficult to predict what this country will now do in the event of war, but the chances of her siding with Russia are as great as those of her siding with Germany. The annexation of Austria and of the Sudetenland and the effective subjugation of Czecho-slovakia have naturally alarmed Rumania who has also an inconvenient minority problem of her own. The death of Queen Marie has robbed Britain of a possible *amicus curiae*. The recent decrees

granting concessions to Polish and Hungarian minorities perhaps indicate a resurgence of German influence and a wise anticipation of events. Hitler has long been casting covetous eyes on Rumania's oil wells and he will certainly force King Carol to join his side. But prior to the Munich crisis Rumania was reported as strongly siding with the Czechs and there was also mention of an agreement with Russia by which a corridor was to be kept open for the Red troops in Rumania. The Munich Agreement has isolated Rumania to a very dangerous extent. This explains the fact that King Carol is casting about for new alliances somewhat hectically. There is talk of a new Little Entente with Jugoslavia and Poland to prevent German aggression in the east, but this is likely to be futile.

Bulgaria, "the worst hit country in the last War," has been recently allowed to arm herself by the Balkan powers who forced her to permanently disband her armies by the treaty of Nieully in 1930. But King Boris (whose wife is the daugther of the ruler of Italy) has been secretly militarising his people with Italian assistance for some time past and today he has quite a sizable army of his own. Recently his people unanimously voted him a large army grant. His sympathies naturally are pro-Italian and in the next conflict he is likely to side with his father-in-law, unless the strategic situation requires him to be neutral in his own interests. The trade pact recently concluded with Germany has given an impetus to German influence in the country. Dr. Goebbels recently referred to the excellent German relations with Sofia and it is very likely that Herr Funk has been able to achieve something more than a mere trade pact. The regaining of the territory ceded to Rumania is a point of honour with the Bulgarians who will

be only too glad to have an opportunity for despoiling the late enemy.

Hungary has been apparently won over by the Germans, if we read correctly between the lines of the recent utterances of Regent Horthy, who was feted so enthusiastically by the Führer's people last September. Hungary's economic interests are closely bound up with those of Germany, her best customer. Besides, her nationals are badly treated minorities in several countries, chiefly Rumania and Jugoslavia, where there are nearly two millions of them. In the next war, Hungary will be an active ally of the Rome-Berlin axis. The Magyars (who are cousins of the Turks) are a loyal and a war-like race and their assistance will be very welcome to the axis. Further, Hungary has a surplus of wheat and dairy produce on which Germany can depend in the event of a blockade.

The attitude of Turkey has been somewhat problematical, especially now that the great Ata-Turk is no more. As a non-democratic country, she has reason to line up with her late ally, but Kemal Pasha steered clear of European entanglements and tried to be especially friendly with both England and Russia, despite his dislike of Russia, the historical enemy, who would despoil Turkey of her control of the straits. There were differences with France over Syria, which Turkey thinks should be hers. The recent appointment of Herr von Papen, an able intriguer, as envoy at Ankara, must give a stimulus to German influence there. But it is possible Turkey may decide to remain neutral in the interests of her economic rehabilitation. The recent £16 million English "loan" to Turkey is, however, significant, as showing British penetration into the Turkish political and economic system. The Germans, in their

turn, have also advanced nearly £12½ millions, mainly for machinery and armaments, and Herr Funk referred to his Ankara visit as completely successful. Ismet Pasha, Kemal's successor, does not like the English, but he has no special liking for the Germans either. It is possible that, in the coming conflict, English diplomacy may score over the German.

Greek politics continue to be as mercurial as ever. While English influence is strong at court, Greek leaders are neither stable nor dependable. Moreover, recently General Metaxas has set himself up as a permanent Prime Minister, on approved Italian models. It is difficult to predict the future of Greek foreign policy. On the other side of Europe are Spain and Portugal. The latter is pronouncedly anti-Communist, but is susceptible to English influence, as the recent pourparlers with Britain would show. There is apparently some sort of a military alliance between Portugal and England and the generals of the two nations are working in close co-operation, although the suggestion of a colonial bargain at the expense of Portugal has provoked bitter comments in the Portuguese press. Spain, on the contrary, will soon be totalitarian and anti-French. The final victory of General Franco is now a question of months, as the Spanish Reds are showing signs of a rapid collapse with only occasional bursts of energy when hunger or foreign assistance drives them. A strongly organised and well-armed Spain is likely to be a source of formidable strength to the Fascist powers. The Iberian peninsula has a plenitude of natural resources; its coal and iron mines are famous and its production of nickel, mercury and copper is also considerable. It has a surplus of food-stuffs which will be welcome to the Central powers in times of

stress. Besides, Spain has at present an army which is somewhat inured to conditions of war on a modern scale and whose strength can run up to a million front-line men. Her naval strength, although not very large, is likely to prove useful to Italy in her Mediterranean manoeuvres. The Balearic Islands possess excellent harbourage as already mentioned, and, moreover, the Spanish influence with the Moors (with whom General Franco has probably come to some understanding) is likely to have serious repercussions among the Algerian natives who are already restive under French control.

What about Asia? A war in the West is not likely to be confined to European waters. Persia, Iraq and Afghanistan have a multilateral alliance which will function in case of need. The English are losing their grip on Iraq, where there is a vocal anti-British Shia party in alliance with the Grand Mufti. Persia has not forgotten persistent British aggression in the past which has resulted in an unconscionable petroleum concession being wrung from the late Shah. The Russian menace is still a bogey with many Iranians. Afghanistan's attitude to British Imperialism has not been very friendly, for many years, and there has been no change recently. Moslem rule is essentially authoritarian and the conservative religious fervour of the average child of Islam makes him unwilling to have much dealing with the fissiparous and god-less Reds. Mussolini, posing as the sword of Islam, carries much appeal in Islamic territories, while recently Japan also has been cultivating Moslem friendship, as a counterblast to the Soviet. It is on the cards that the non-Arab Moslem states will not side with England or Russia in the next war. They are likely to remain neutral, unless forced by inexorable necessity to

enter the arena (when they will mostly help the totalitarian states).

The case is somewhat different with the Arabian people, who have much reason to fear and dislike both British and French imperialism, whose record in the Arab Mandates of Palestine, Iraq and Syria has not escaped strong criticism. The unsuccessful attempt to partition Palestine and the French dilatoriness in dealing with the legitimate demand for autonomy in Syria have fomented ill-feeling in neighbouring Arab lands. There is a universal sense of disillusionment and discontent in Arabia (which is mirrored in the Memoirs of the late Col. Lawrence) with regard to the unfulfilled promises of the Allies. The Italian claim to be the champion of Pan-Islamism, coupled with assiduous cultural and economic propaganda and gun-running, has drawn the Arabs towards Italy, the result being that in the neighbourhood of the Suez Canal and the Red Sea, the Italo-Arab influence is preponderant. It is significant that in the recent bargain with Italy, the cessation of anti-British propaganda was one of the conditions of the Treaty. The propaganda has subsided, but the old animosities have not been overcome. The Whitehead Report, which has been rejected by the British Government, has not placated the Arabs. The proposed Round Table Conference, with the Grand Mufti kept out of it, is not likely to achieve permanent peace. English diplomacy, which is torn between a desire to pacify the Arabs and a keenness to keep in step with influential international Jewry (which is particularly potent in America) is sure to meet stormy weather in the troubled waters of Near Eastern politics.

CHAPTER VII

THE SINO-JAPANESE WAR AND ITS MORAL

LET us in turn glance at the Far East. Here the land of the Rising Sun has been making colourful and sanguinary history. It is now considered in some quarters bad form to admire Japan; and there is no doubt that the atrocities of the Japanese soldiers have been such that elementary justice forbids admiration. Yet to appreciate and evaluate her even as an enemy, it is necessary to understand her strength as well as her weakness, her virtues as well as her obvious short-comings. To underestimate a possible opponent is a successful way of courting disaster, as the Russians found to their cost in 1905.

Japan has been the "infant phenomenon" of the East. Seventy years ago, Japan was almost non-existent on the political map of the world. She was then a semi-feudal state under the despotism of usurpers, torn asunder by internecine war, poverty-stricken, ignorant, backward, but free. Today she is one of the big powers, economically transformed beyond recognition and industrially much ahead of most western countries. The secret of this meteoric rise lies essentially in two things, connected with the Japanese character, namely, their patriotism and their capacity for adaptation.

The love of the Japanese for their country is something which has no parallel in the world. Giving one's possessions, one's family and one's life for Dai Nippon is considered a privilege in that country. This patriotism has

bred such an intense national consciousness that there is an involuntary feeling of national superiority. This is understandable if not excusable, seeing that practically all advanced nations have been victims of the race-bug. In their own day, the Greeks, the Romans, the Turks, the Spaniards, —all believed that they were the very elect of God and had a supreme contempt for the conquered peoples. At the present time, the average Englishman believes that his country is the best under the sun. Actually a parliamentary debate and a virulent newspaper campaign once ensued a school inspector's doubt on this point. The second stanza of Britain's national anthem shows what a flattering idea of other nations the patriotic Britisher has. On the Continent, except perhaps in France, the colour bar is strong, and a deification of race culture and race history is the mode. Especially among the Nordic races, the "blonde beast" looms large as the object of fervent adulation. The same might be said of the average American, whose treatment of the Negro clearly shows that the high-sounding catchwords of the Revolution are earmarked for the whites alone. Have not our own Anglo-Indian penny-a-liners often gone into raptures over that special brand of British civilisation, which, as a labour of love, is supposed to be carrying the torch of learning, culture and religion into the benighted East? There are today public places of recreation in South Africa, where the sign-boards are displayed: "No dogs and Indians allowed." In our own country, our rulers have accomplished a rigid compartmentalisation of European social life in clubs, on railways, and hotels and the superiority complex reigns supreme among them.

The second thing to be noted is that the Japanese love and venerate their Emperor in a manner which must sound

strange to the westerner.[1] The Mikado is to the Nipponese, the lineal descendant of the Sun Goddess. It is a historical fact that the Imperial House of Japan has survived uninterruptedly for 2,600 years and is thus the oldest ruling family in the world. The person of the Emperor is sacred and even in the worst days of the various Shogunates, it was held inviolable. This divine conception of Kingship is not peculiar to Japan, but its persistence even to this date is a remarkable social phenomenon. The Lama rulers of Tibet are terrestrial gods. The princes of Sikkim and Bhutan enjoy the status of "Tulkus" or reincarnations. In our own country, the pedigree of some potentates is turned back to the sun and the moon. The Aga Khan is the Vicegerent of Allah to his followers. The Caliph, till his recent abolition by the Ata-Turk, was surrounded with divine attributes. Even in the sceptical west, the divine right of Kings and Popes has held sway. But on this Japanese scale, and in a temporal sphere, godhead in king is unparalleled today.

Allied to their patriotism is their adaptability. The Japs are the greatest imitators in the world. Their alphabet is borrowed from India (the ancient Pali) as well as their principal religion. Their written characters are from China

[1] Two stories may be mentioned about the ordinary Jap's love for his Emperor. Once there was a fire at a school and all the children trooped out. Suddenly, the head-boy remembered that the picture of the sacred Emperor was left behind in the burning Hall. He rushed in to rescue it but the fire trapped him to death. When the firemen found him, they saw that he had cut open his stomach with a pen knife and inserted the precious picture of the Emperor into it so that it might not be damaged! The other story relates to the renowned Count Nogi, the hero of the Russo-Japanese War. This brilliant soldier, as soon as he heard that his beloved Emperor was no more, committed *harakiri* over his patron's body, so that his own spirit may follow that of his master!

which also supplied their art, literature, rules of conduct and domestic economy. Their culture they originally took from Korea, later embellished it with Chinese trappings, and quickly adapted it to suit western models. Their political system has been fashioned out of British precedents, complete with the party system, limited monarchy and all; while their industrial organisation has been copied from Germany and the United States. In many respects, the imitators, however, have gone ahead of their originals and they can now not only copy to perfection but also create with originality. In handicrafts and modern industries, Japan has beaten her rivals by their own methods. The Japanese workers (especially the women) have proved to be a marvel of quickness, precision and efficiency. It is fashionable with European and American critics to decry the low wages and long hours in Japan. Yet the British Trade Mission, which visited the country some time ago, found the factories and dormitories clean and healthy, the workers well-fed and contented, very different from the sweated, scare-crows they were commonly pictured to be. It must be remembered that Japan, like India, is essentially an agricultural country with over 80 per cent of the population following that profession. Even in the industrial callings, the factories are of the small-scale kind and situated in villages and small towns.

The Japanese soldier has been the admiration and envy of the rest of the world. His bravery is unequalled. At the word of command, he will face the most tremendous odds and bear the most excruciating pain without a murmur. It is the boast of the Japanese generals that their army manuals do not contain instructions on how to retreat in good order for the excellent reason that the Japanese army

never retreats. Observers have noted that in mock warfare between battalions, the soldiers set about their work in such grim earnestness that they have to be held back to prevent bloodshed. The story of the three "human bombs" deserves to be told. In the attack on Shanghai in 1932, the Japanese were much worried by a strongly entrenched Chinese line. Attempts to storm the line proved difficult and costly as the Japanese could not approach near enough to bomb it. Three Japanese soldiers thereupon had a brain-wave. They loaded a large bamboo tube with explosives and dashed with their terrible burden into the Chinese trench, blowing up a large part of it and incidentally themselves with it. Needless to say, the line was easily taken, and the dead heroes had a memorial dedicated to them in Japan. The Japs are so eager for a fight that they often make costly frontal charges, even when not indicated by the situation. This was noticed in the Russo-Japanese war and again at Chapei in 1932.

Next to their bravery is their simplicity. The Japanese army is not a mass of bulging knapsacks or shining buttons. Their dress is simple, even homely. The soldiers are encouraged to rough it as much as possible. Officers, for example, are not allowed to wear overcoats (as in the European armies), as the Japanese High Command think that this omission makes them keep hardy. The food of both the private and his superiors is frugal and simple. It may surprise Indians to know that a large majority of the Japs are vegetarians, consuming in a day only a few rice-balls and soya-bean cakes with pickles and vegetables added for relish. Before 1868, no meat-eating was allowed in Japan and even today all dead animals are handled by a special community of men, called Eta, who number about

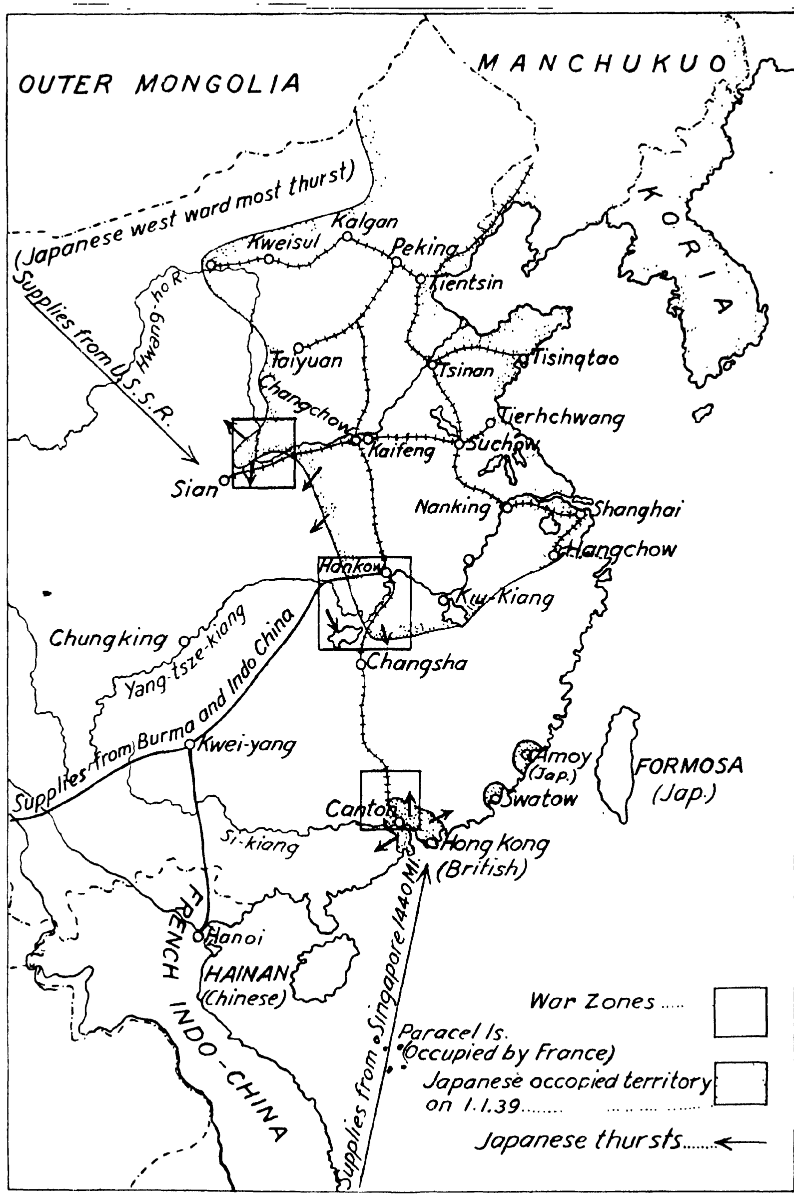
a million and who are treated as professional untouchables. This light regimen facilitates cheap maintenance and quick movement and enables the army to practically live upon the country occupied. The Jap army is not a parade-ground exhibit. The men do not march in step (except when under inspection), and they carry themselves in an unorthodox manner. But as fighters they rank with the best in the world. In all the foreign wars that they have been engaged in, in recent times, they have acquitted themselves creditably. The capture of Nanking especially is likely to go down in history as an act of great daring, cleverness and perseverance. In the Korean war of 1894 and the following Chinese war their casualties were negligible. In the Manchukuo campaign they are stated to have lost less than 1,000 men, while the Chinese death roll was well over 20,000.

The Japanese generalship has been highly commended by competent critics. The battle of Hsuchow is likely to be acclaimed by experts as one of the greatest military *tours de force*.[2] The Jap generals seem to possess the quality essential to military success, *viz.*, the capacity to inspire confidence in their men and diffidence in their opponents. Napoleon used to say that Gaul was not conquered by the Romans but by Cæsar, and that Rome itself was shaken to its foundations by the inspiring name of Hannibal. Napoleon exemplified in himself the value of leadership by the brilliant manner in which he could often snatch victory from the jaws of defeat and assert himself

[2] The capture of Canton has been effected with such remarkable celerity and skill that it has won approbation even from unfriendly quarters. The advance of 60,000 troops over a distance of 80 miles in a week's time across difficult and contested country is a tribute to the rapid and efficient mechanisation of the invading forces as well as to the strategy of the Japanese Command.

with his compelling magnetism of personality and unrivalled strategical skill. It would be a truism to say that no great national wars can now, as ever, be successfully waged without the *sine qua non* of sound and superior generalship.

In the present Sino-Japanese struggle, the reasons for the repeated failures of China and triumphs of Japan are not far to seek. The Chinese far outnumber the Japanese. Their bravery is approximately equal, while their endurance and disregard of pain are phenomenal. And yet they are outmarshalled at every turn. The Chinese want of success is due to three causes: lack of equipment, lack of united leadership and lack of the will to win. While the Japs are well-supplied with artillery, tanks, armoured cars, ammunition and (particularly) aircraft, and have, with the aid and technical advice of the Germans, been utilising the most modernised weapons of war, the Chinese are very ill-equipped with these accoutrements, in spite of occasional help from Russia, France and America. Secondly, the centrifugal tendencies in the country are notorious. The official hierarchy is so loosely knit that discipline, cohesion and common objective are frequently lacking. The provincial governors have been semi-military dictators, owing faint allegiance to the Central Government and apt to fly at each other for profit or pleasure. The authority of the Koumintang was challenged by the Cantonese in the south and by the Communists in the north. The people themselves have evinced a fatalistic indifference to all changes of governments, which reminds one of the "Let-Rama-or-Ravana-rule-my-land-for-all-I-care" attitude of the average Indian peasant,—an attitude which has kept him unchanged in spite of centuries of governmental changes. It is true that in China there has been a rebirth



THE WAR IN CHINA

Note: The island of Hainan has since been occupied by the Japanese.

See reverse.

NOTES ON MAP "WAR IN CHINA"

This map illustrates the military position in China as it is to-day. The Japanese steam roller has come to a temporary halt, but its engines are still racing noisily. The recent utterances of Japanese statesmen indicate that they are not intent on further extending their hold on China but desire to consolidate the position in the area (which is twice the size of the Japanese empire) already occupied. The war has cost Japan £450 millions and a quarter of million men. The Chinese losses are estimated at nearly a million men. The Japanese claim to have captured 250,000 rifles, 10,000 machine-guns, 2,500 pieces of artillery, and 250 tanks and armoured cars. These figures indicate that China must have received large supplies from Russia, France and America. As shown in the map the area round about Hankow, Suiyan (the heart of Communist China), and Canton are the main war zones. It is admitted by Japan that nearly a million Chinese and regulars and 400,000 Red guerillas are still operating against the invaders. Thanks to a change of policy, it is likely that the Japanese High Command will attempt a pacification of Eastern China by establishing subservient puppet states (under Chinese leaders like Marshal Wu-Pei-Fu) and a domination of the country through them.

of nationalism recently and an attempt at military preparedness, but the Japanese invasion has taken place too soon for the movement to give new tone, life and strength to the Celestials. The Japanese, on the contrary, are united to a man through their drinking deep of the cup of the Shinto and the Kudo ("the way of the Gods" and "the way of the Emperor" respectively). They further know that in the depths of China, there is no retreat for them; they must either win or get annihilated. This is why they are now fighting with such grim and usually successful determination.

Foreign observers are struck also by the lack of coherent leadership on the Chinese side. Generals with big reputations have proved singularly deficient in strategy and skill in campaigning. The honesty of some Chinese Generals has also not been beyond cavil and it may be remembered that the Governor of Woosung, whose premature retirement from Shanghai demoralised the defence of Nanking, was executed for corruption.[3] The Japanese, having found that the "golden key" will open the gates of many lines and fortresses otherwise considered impregnable, have not avoided recourse to this method of penetration. Recently on these and other grounds there have been serious bickerings between the Koumintang and the communist generals and these have resulted in much vacillation at headquarters.

The rise of Japan as a world power and the *dénouement* of the Sino-Japanese war are both full of lessons for India. In the first place, Indians must learn that the game

[3] It is reported that altogether 50 generals and commanders have been hitherto executed by Marshal Chiang-Kai-Shek for corruption and failure of duty.

of international politics requires the force of the State (the *Rajadanda* of Indian polity), the might of arms, for the assertion of political rights. No nation has ever won emancipation, much less retained it, by incantations of *Ahimsa.* Spiritual power is indeed a mighty force and must permeate a nation's dealings across the international counter. The noble ideology of truth and justice is necessary to strengthen a cause, whatever it may be. A just and righteous cause fires the imagination of soldiers and impels them forward to success; on the other hand, an unrighteous cause, other things being equal, will always be a drag upon the mental capacity of the fighters. Secondly, those countries which would hanker after empire-building or even national independence (whether it be "substance of independence" or Dominion Status) must, first of all, go through the ordeals of physical hardihood, must shun pleasures and live laborious days, and build up high standards of public character. Cæsar's Romans, Cromwell's Ironsides, Richard I's Crusaders, Shivaji's Mavlas—all had these outstanding qualities which make for political success. Thirdly, India must cogitate and cogitate deeply on the changed technique of war and the manner in which Japan has adapted herself to it, by building up an efficient and modern system of industrial production, and by recognising that neither defence nor offence is possible for a country which has to rely perennially upon foreign supplies of arms and ammunition. In India, today, we have a plenty of patriotism, and a plethora of man-power which need to be properly organised and intelligently directed. The present Congress policy, suitable perhaps to a peace-time struggle with British Imperialism, is wholly unsuited to the requirements of a situation in which Britain may be physically

incapable of rendering assistance in keeping our enemies at bay. One can, of course, understand that for the votaries of Non-Violence to suddenly change front and start supporting Violence, even though it be in a good cause, a righteous cause and a just cause, even though it be for defence of King and Country, would be a major error of inconsistency. But, to quote Mahatma Gandhi's own quotation from Emerson again, " Inconsistency is the hobgoblin of little minds."

The Chinese war also reveals how the changed mechanics of war has completely altered the balance of military strength. Before gun-powder was widely used, the strength of fighting forces were generally assessed by numbers alone. The use of firearms, especially heavy artillery, later nullified the superiority of numbers, and usually gave the victory to the better equipped. In the last war, however, numerical strength again came into play, as between forces of approximately equal mechanical efficiency. But more recently, with the phenomenal development of such weapons of offence as tanks, quick-firing cannon, and aircraft, the scales have weighed on the side of the combatant better supplied with these superior auxiliaries.

The Chinese war is full of other forebodings to a weak and unorganised nation like ours. While it has demonstrated the futility of mere numbers, it has revealed the urgent necessity for a country, which lacks control of the sea and a ready inflow of foreign credit, to ensure a domestic supply of all the vital instruments of a modern large-scale war. A shortage of weapons or ammunition, when a war is on, will be nothing short of a major disaster. This was proved during the last war, when Russia ran out of rifles, and some of her soldiers fought with ancient weapons like

spears, and clubs against an enemy armed to perfection. A lack of long-range field artillery on the English side made it necessary for England to practically coerce Portugal (who possessed excellent guns) into joining the war, as Lord Grey mentions in his book, *Twenty-five Years*.

The Chinese war also reveals the need for a defending country to have a scientific and well-thought-out plan of action. The various episodes of the struggle have hitherto revealed a great vacillation and a lack of a well-planned defence at the Chinese headquarters. Their generals have proved singularly deficient in strategy and consistent action, while the Japanese commanders have shown themselves adept at dealing heavy frontal blows at the enemy while at the same time executing effective flanking and rear-line thrusts, based upon the famous pincer-like movement, thus reducing a much larger force to impotence by rolling it upon itself (as Hannibal did at Cannae) and making its own numbers its greatest handicap. Marshal Chiang-Kai-Shek also seems to have pursued a somewhat wavering military policy, as his successive resorts to "positional" and to guerilla warfare, without striking success, demonstrate. An early and consistent application of Fabian tactics, which would allow the enemy an entry into the land but would harry him so incessantly by lightning hit-and-run attacks as to render his superiority ineffective, would have saved China many thousands of lives and an enormous quantity of arms and munitions. When the invader is finally worn out by persistent guerilla warfare, a pitched battle could be offered with great prospects of success. The Chinese had also shown themselves, before the war commenced, weak in propaganda and counter-espionage and in that spiritual mobilisation of the people

which is so essential to success. The Japanese, on the contrary, appear to have prepared their ground long and patiently, and, thanks to General Doi Hara, the Lawrence of the East, to have succeeded in obtaining some valuable information and local assistance for the furtherance of their military objectives.

PART II

THE PLANNING OF INDIAN DEFENCE

CHAPTER VIII

INDIA AND THE COMING WORLD WAR

WHEN will the next War take place? What will be the immediate pretext for its commencement? What will be the position of India in such a struggle and how will she be affected? It is possible to answer these questions not with absolute certainty but with a fair degree of accuracy. Bertrand Russell, who, in his brilliant book, *Which Way to Peace*, holds that the universal apprehension of war is itself the most potent cause of war, expects that war will come soon and suddenly. "Fear of war," he observes, "is used to justify armaments; armaments increase the fear of war; and the fear of war increases the likelihood of war. From this vicious circle some Governments do not wish to find an issue; others are unable to do so." The year of grace 1938 sees the principal nations of the world spending between them the stupendous sum of £3,000 millions on various kinds of engines of destruction. H. G. Wells, who has the gift of prophecy in an eminent degree, predicts that the next war will take place in 1940. There are other observers who incline to a similar view. The reasons are not far to seek. There will be no war till both the groups of combatants are ready. England, who will be one of the principal participants in the struggle, is not yet ready, as her armaments programme had badly stalled and is not likely to be completed before 1940. But for this fact, the British lion would not have of late sprawled in supine inaction when its tail was

being trodden upon by insolent neighbours.[1] Recently, several events have taken place each one of which would have led to clear hostilities a quarter of a century ago. The militarisation of the Rhineland, the invasion of Abyssinia, the anti-British propaganda among the Moslems, the attack on British mercantile units in the Mediterranean, the Shanghai incidents and the Austrian *Anschluss*, all of sufficient gravity to have precipitated a resort to force, have merely made the British lion growl and snarl. It well knew that its own shaggy mane was not adequate to stand the strain of a modern three-dimensional fight. The Central powers also are not yet primed for a conflict. Italy has not yet recovered from the strain of the Abyssinian adventure; her conquests in that country are yet uncapitalised, while the Spanish incursion is yet to be determined. The recent heavy imports of arms from France over the mountain frontier have given a fresh lease of life to the Republicans in Spain and it is anticipated in insurgent circles that their mopping up operations in Catalonia and in the west of Spain will take some considerable time, perhaps as much as six months. The recent defeat of the Republicans over the Ebro and the Segré fronts has probably demoralised their defences, but, in spite of talks of a truce, there is no evidence yet of a collapse. An early victory, as anticipated by General Franco is, therefore, not likely. The setting in of the severe post-Christmas winter will retard military operations.[2]

[1] For the American view of English politics and its growing weakness the reader is referred to Quincy Howe's recent book, *England Expects Every American to Do His Duty*. A more vehement, and perhaps, less balanced criticism, of recent British policy is contained in Robert Briffault's *The Decline and Fall of the British Empire*.

[2] The recent victories of the Nationalists on the Ebro and the Segré fronts may make it appear as if Catalonia will soon be

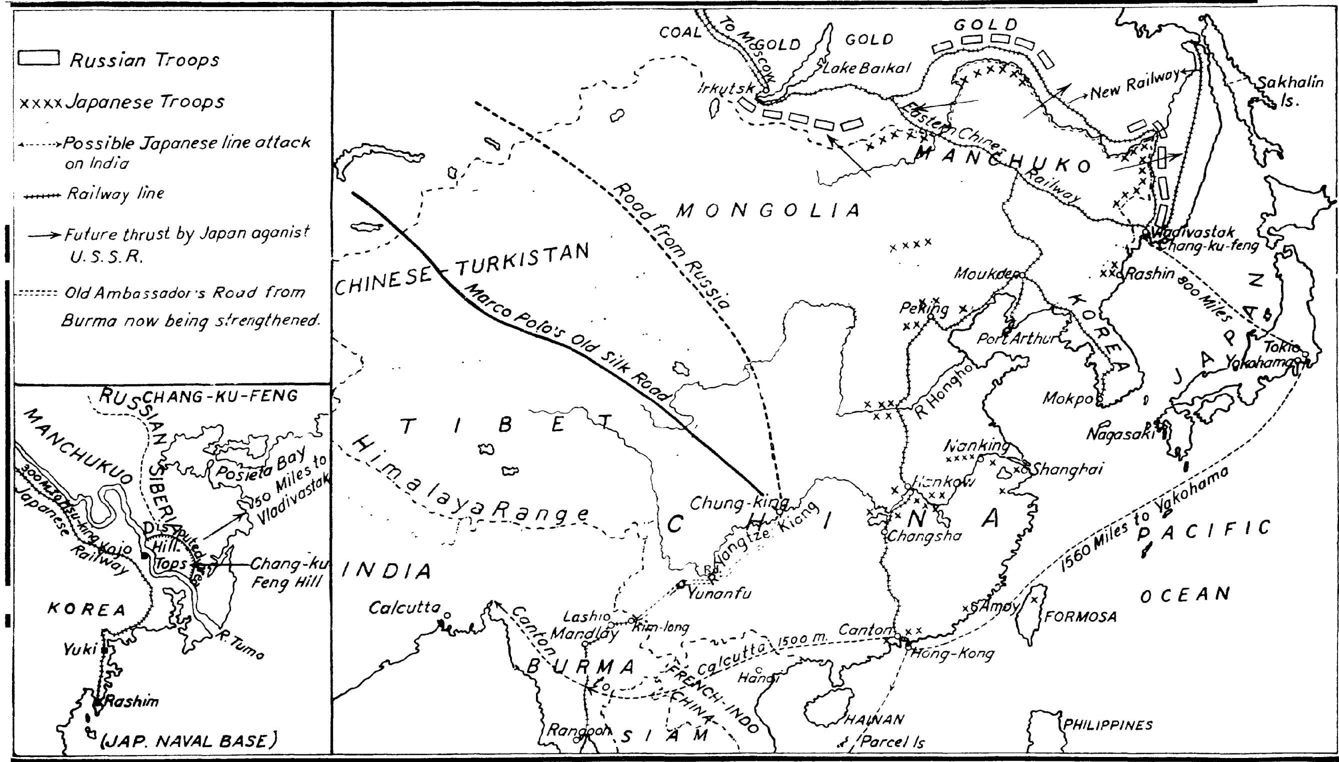
Moreover, the plan of withdrawal of volunteers, which is expected to reach fruition in a few months, will also retard the tempo of the insurgent attack. It is certain that Italy will not voluntarily start a European conflict until and unless a strong fascist government is firmly established in Spain. This position is not likely to be realised till the summer or winter of 1939. As regards Germany, her plans are, in some measure, still incomplete. Her air force is dominant, it is true, but she wants also a Nationalist Spain to act as a drag in the rear of France. Further her main objective is Russia now. Her accepted strategy is to hold France and England at bay with the minimum of her military resources from behind a wall of light fortifications and to attack in massed strength the Soviet Union. For this purpose, Germany requires the collaboration of Japan, who, however, has deeply embroiled herself with China. Till the Sino-Japanese struggle is over, it is clear that Germany will not feel secure in her attack on Russia, whose immense man-power and vaunted strength in the air are enough to make even her strong neighbours nervous about trying conclusions with her. The German schemes for self-sufficiency in raw materials are still half-fledged, and Hitler realises that a war can be successfully finished on ration-cards but cannot be begun on them.

It is difficult to prognosticate the end of the Chinese struggle. The war was started with the two-fold view of beating China into submission and possibly into an anti-communist alliance, and of getting access to the rich coal and iron mines (the biggest in the world) of North-East China. But the bitterness of Chinese resistance and the large inroads

overrun. In reality, however, it is likely that the Spanish war will continue for several months more.

made by Japan into the continent render it difficult for the latter to draw back with grace and security without establishing a *modus vivendi* with the beaten enemy. Some observers considered that Japan would be satisfied with setting up a tractable autonomous Government north of the Yang-Tse river, with garrisons at Peiping, Nanking and Hankow ("the heart of China") and controlling the Chinese coast from Shanghai to Korea. This impression was reinforced by recent developments in North Korea where the Soviet staged an impressive diversion by attacking Chung-ku-feng. The Soviet interference temporarily shifted the centre of gravity to the contentious Manchurian border. But the aggressive military clan in Japan would not rest content till the whole of China is brought under Japanese suzerainty and Chang-kai-shek driven into far-off Sinkiang. The recent attacks on Amoy, Swatow, and Fuchow indicated a southern orientation of Japanese strategy. The capture of Canton, accomplished in such a brilliant manner, has now definitely drawn Japan into South China and the advance down the Hankow-Hongkong Railway to Changsha is taking her further into the interior of the huge subcontinent. It was announced by Japanese authorities recently that the policy of isolated military operations in China will be substituted by a concerted and enveloping drive against the Chinese military power. The attempt to subdue the whole of China is bound to be a prolonged and costly process. American military correspondents believe that China, despite her recent losses and the withdrawal of German support, will be able to hold out for a considerable time south of the Yang-Tse especially now that foreign financial help is forthcoming.[3] The

[3] The U. S. has recently granted Chang-kai-shek a "loan" of $5 millions for munitions; the English on their part have advanc-



RUSSO-JAPANESE TENSION IN THE FAR EAST

NOTES ON MAP "RUSSO-JAPANESE TENSION IN THE FAR EAST"

This map indicates the position of the Russo-Japanese troops in eastern Asia. It shows the vulnerable position of the Japanese cities. The map indicates also the possible future lines of Japanese attack on the Soviet and the commercial importance of east Siberia to Japan. It also shows the road-ways leading from Russia and Burma into China. Through the northernmost road, thousands of Russian lorries are now carrying arms and ammunitions to Marshal Chang-Kai-Shek. The middle road (Marco Polo's old silk road) is also utilised for the transport of war materials from Russia and overland from Europe. In the south, the road from Rangoon and Mandalay passing through the eastern Himalayan spurs is noticeable. The road from Lashio to Chung-King is now being strengthened by thousands of coolies and engineers who are widening the roads and buttressing the bridges. It will be remembered that many hundred tons of war materials have been landed at Rangoon for transport to Chung-King by water and by land via Mandalay, Lashio and Yunanfu. This map also indicates the possible line of attack from Canton on Calcutta through French Indo-China, Siam and Burma. Now that Hainan has been occupied by Japan, the danger to the China-Burma road is greater than ever.

In the inset the position of Chang-ku-Feng during the last fight is shown. This area is of great strategic importance as the hill commands the harbour of Vladivastok and the air bases nearby.

ultimate success of Japan in her southern campaign is believed by them to be doubtful in the light of the Soviet threat and the precarious condition of Japan's overstretched lines of communication.

It is predicted, however, in Tokio that the occupation of Northern China will be complete within six months. In case the southern drive is persisted in, the campaign is likely to last till the summer of 1939 up to which time Japan can scarcely be in a position to turn her attention to other quarters. The recent cabinet reshuffling at Tokio may have strong repercussions on the Chinese war. There is reason to think that the principal objective of Japanese strategy in the South is the railways, which, few as they are in China, are the arteries of her industrial and military life-blood. The capture of Canton must now dam the current of foreign military supplies from Honkong and French Indo-China leaving only the Burman route open. The ultimate result of these developments will be the end of the Chinese resistance and a dictated peace. Time alone will show how the events will actually shape themselves, but it is believed in quarters *au fait* with the situation, that Japan will accept mediation on conditions which leave her in full control of China, north of the Yang-Tse and east of Hankow.

The conflict between Japan and Russia is something of a race against time. The latter country has succeeded in doubling her trans-Siberian line from Moscow to Lake Baikal, but the link between the Lake and the port of

ed half a million sterling from their Export Credit Fund, and have promised further advances for the purchase of lorries. It may be remembered that the corpus of this Fund was raised from £50 to £75 millions, and the rules for giving credits relaxed for this purpose.

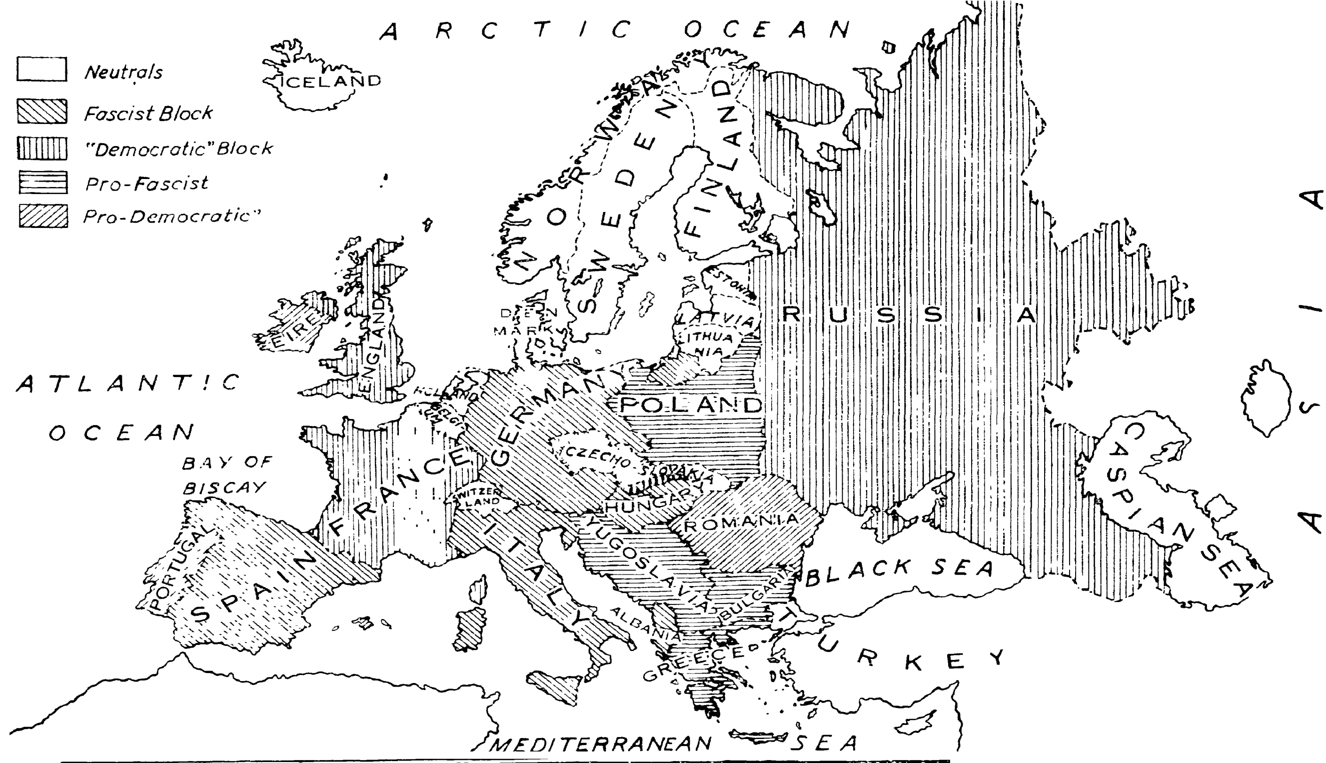
Vladivostok is in parts still uncompleted. Till this is ready, Russia will not be able to counter effectively Japanese moves against Siberia, with its plenitude of mineral and oil wealth. The conflict of interests in this region is obvious. Japan would like to launch her attack before the Far Eastern port is linked up to Moscow by a double chain of railway, while Russia would temporise with her adversary till the line is strategically ready. The Chinese adventure is Japan's current dilemma. It has lasted already too long and has demanded nearly two million reservists from home. It shows no sign of terminating early enough to enable Japan to start her rumpus with Russia. Even if the hostilities with China are suspended through a patched-up truce, it will take Japan many months to recuperate her exhausted strength.

The same conflict is evident in European war schools also. England would prefer to stave off the evil day when she will have to mobilise her army, until her rearmament is complete. This is not expected till 1940 when the peak of aircraft production will be reached. The Fascist powers, on the contrary, would like to resort to the *ultima ratio* before England is fully equipped. Broadly speaking, the Leftist intransigence in Spain is holding up the Central powers in Europe; in the East, the Chinese resistance is delaying the long-projected attack on Siberia by Japan. Till both these wars are settled in a way that is satisfactory to the anti-communist *bloc*, a general commencement of hostilities is not very probable. It would not be a bad guess that the totalitarian States will not be ready for action till the summer of 1940. Judging by what has already been indicated, the trial of strength between the two camps will in all likelihood not be postponed beyond 1941.

It is not impossible to guess on what pretext the war will break out. The future cockpit of Europe will be the Ukraine, and the future battle-field of Asia, Eastern Siberia. There are no arch-dukes left to be assassinated but the French are still pledged to defend Russia. The position of the latter country is extremely precarious today. Her progressive decline has been exposed in some measure by recent events. Both Japan and Germany are eager to pick up a quarrel with her at a moment propitious to the anti-communist *bloc*. The eastern drive of Germany has this end in view. The idea of a motor road across Czecho-slovakia is due to military reasons not unconnected with this objective. When the road is ready, Hitler (ably aided by Poland and Hungary) will stage a sudden and overwhelming attack on the Ukraine, where there is already a vocal minority of Germans. If Rumania allows a free passage to Fascist troops, she will probably be safe but if she resists, as Belgium did in the last War, she will be annihilated.[4] Simultaneously, an attack on Siberia will be launched by Japan, and the Bolsheviks, with their strength divided between two fronts will probably fare badly in the fight, at least in the initial stages. It may be remembered that Russia has lost practically every big war she has waged hitherto. The attitude of France will decide whether the conflagration will spread to other parts of Europe or will be localised. Bound by treaty ties and by tactical necessity

[4] Recent events in Rumania indicate the great nervousness which is felt there. King Carol visited Herr Hitler in December last and following this visit, the laws against the Jews have been tightened up. A National Guard on fascist lines has been formed and a Single Party system introduced. Madame Lupescu, the King's Jewish mistress, appears to have been sent out of the country.

to Russia, France will in all likelihood attack Germany in the west to create a diversion. This will bring in Italy, as also England on either side of the combat. It might well be that the ruling interests in Britain and France would essay a benevolent neutrality towards Russia, but the question is, Will the masses in these two countries look on passively when Russia is being overrun? If the Tories in both the countries resist the Socialist interventionists, they will court a revolution. Recent events in France, in particular, bear ample testimony to this. Even apart from this socialist orientation of the masses, Anglo-French diplomacy has been already severely criticised by experts for letting down a useful ally in the Czech crisis. To abandon Russia also will be a *faux pas* and an imprudence which will be regarded as tactically most undesirable. Elementary military necessity, therefore, requires that France, England and Russia stand together. If Russia is beaten, the position of the democracies will be badly compromised. The recent declarations of non-aggression and neutrality, between Germany on one side and France and England on the other, are merely in the way of attempts on the part of Germany to prevent the democracies from helping the Soviet; so far as France and England are concerned, Conservative diplomacy, guided by the capitalist groups in the two countries (of the type of the well-known " Cliveden Set ") and influential papers, like the *Times* and the *Action Francaise*, hopes that to permit Germany to try conclusions with Russia might be an easy way to a permanent abolition of the Bolshevik bogey. But the chances are that an attack on the Ukraine will provoke a conflict which is bound to spread all over Europe, because the interest of the totalitarian states and those of the



See reverse.

EUROPE IN 1940

NOTES ON MAP "EUROPE IN 1940"

This Map is intended to indicate the political position of Europe in 1940 in which year it is most likely that a war will break out. The Munich agreement may have brought peace with honour or dishonour without peace. according to one's viewpoint, but it is evident that permanent appeasement cannot be conceived in the womb of successive surrenders. A clash between the "*Swastika*" and the "*Hammer and Sickle*" is inevitable and this clash will drag in practically the rest of Europe. As shown in the Map only Rumania and Portugal are likely to side with the Democracies. It is ture that in Rumania there has been a tendency tofards Fascism (including the one-party system and the Roman salute) but Rumania's destiny lies with the Democracies. Hungary has already joined the Fascist *bloc* and the adhesion of Yugoslavia, Poland and Bulgaria to the *bloc* is only a matter of months. Czecho-Slovakia may nominally remain neutral but in reality it will be a passive ally of Germany. In this fateful year 190 million Fascists will probably be ranged against 200 million Socialists and Democrats in Europe alone.

imperialist democracies are so incongruous and incompatible with one another, that friendship or non-aggression pacts have little binding effect. As Bertrand Russell observes, "the possibilities of conflict are endless, but one thing is certain: both sides are clever and unscrupulous and both are keenly alive to the first blow."

In the coming *mahayuddha*, what will be the *rôle* of India? That she cannot be a mere passive spectator is self-evident. As a unit of the British Empire, she cannot remain neutral, when the Paramount Power goes to war. Further, the *locale* of the struggle is likely to be such that an attack on India is more than likely. That both Italy and Japan will be ranged against the British Empire is now almost on the cards. Italy is sure to concentrate her attention on the Mediterranean, the Near East and the Middle East. In the Mediterranean, the struggle will be predominantly a naval one. In the Near East, Italy will probably not encounter much opposition, as our study of the political *milieu* there in the previous Chapters shows. This leaves India as the main target of Italian attack. We have already seen how well-organised Italy is on the Red Sea and the African littoral. It is rumoured that about 600,000 infantry have been assembled in Eritrea, Lybia and Abyssinia. Large concentrations of aeroplanes have been provided here and at the formal declaration of hostilities (or perhaps even before that, according to the newly current international practice) Italy will immediately send over large squadrons of bombers to our western coast and spread death and terror among the civilian population. The Italian submarines will follow and infest the waters of Karachi, Bombay, Cochin and other western harbours and play havoc with our merchant shipping there. It is on

the cards that Italian troops will land in Sind or Gujerat and commence the process of swift territorial occupation through a fan-like military expansion. Sind, especially, will be an ideal jumping-off place for any would-be conqueror. It is practically isolated from the north and the east by deserts crossed only by two narrow strips of railways leading to the Punjab above and the rich tracts of Gujerat below. These railways can easily be put out of commission by air action and the population, which is scanty and non-martial, cowed down to a complete submission as was done by the Arabs twelve centuries ago. The present resources of Sind in raw materials are not insignificant, while there are good harbour facilities.

An attack from the East by the Japanese is less probable though not impossible. For one thing, Japan will be quite busy in the next war in Siberia, where the bulk of her fighting forces will have to be deployed. Further, China, who can only be lightly held, will require considerable garrisoning to keep the restive population under check. It is very unlikely, therefore, that Japan will be in a position to extend her lines of communication so far to the southwest as to menace India. Similarly, a march *via* the Burmese frontier can be essayed by Japan only after a complete subjugation of the intervening territories. Modern armies, unlike the armies of Hannibal or Napoleon, have to keep in perennial contact with their bases. Japan, without conquering the whole of South China, cannot keep her line of communication with the invading armies safe and uninterrupted even for a limited period. Unlike a naval campaign, a campaign on land suffers by too lengthy lines of communication. Japan may and will, however, attempt occasional air raids to scare the populace of our cities and to

divert English and French attention to India, Burma and French Indo-China; but for a sustained and prolonged land campaign against us Japan is not yet fully equipped. Japan's main objective will be to suppress the communist rule in Eastern Siberia and to consolidate her hegemony over China.

All this does not mean that Japan is not interested in India. Far more than that of China, the possession of our country is the dream of the ardent Japanese imperialist. He remembers how the teeming millions of India were lorded over for three hundred years by a mere handful of the Yellow Race under princelets hailing from the barren fastnesses of Samarkand. He also remembers how the Osmanli Turks (a branch of the Mongol race) were masters at one time of the whole of the Near East, Egypt and all of the nearer Europe outside Russia. To the Japanese, the hoisting of the Sun-flag in all the lands where the Mongol race formerly held sway, is something of a divine mission. But the Japanese, of all the nations of the world, know well how to bide their time. They know that the hour of Yellow supremacy has not yet struck.

The danger to India, therefore, is to be found in the west. How poorly equipped India is to meet this danger is a matter of common knowledge. The process of national emasculation has advanced to such a degree that India is today probably the weakest of all the civilised nations in the world. " To make a desert and call it peace is the favourite trick of Imperialism " said Cicero long ago. The *Pax Brittanica* has succeeded in making of our country a veritable Sahara of *military imbecility*. Our population has earned a unique reputation for its docility and submissiveness. Only one out of every ten men here has

probably seen a firearm; only one out of a thousand has handled a gun. Even our professional soldiers have been largely kept out of the artillery, while advanced mechanical warfare is also a *terra incognita* to them. This was revealed during the last War, when in Flanders, the sturdy Sikhs and the plucky little Gurkhas looked with an astonished and accusing eye on their commanders who had kept them in blissful ignorance of the current technique of large-scale fighting. Our soldiers, who were adepts in dodging the bullets from the guns of the recalcitrant frontiermen, found themselves thoroughly at sea in the mud of Belgium, face to face with a foe whose mechanical supports were of the very best. Let us see what happened to our splendid young fellows in this heaving inferno. They were herded into trenches, sometimes too high for them, after spending nights and days in dismal fog or biting rain. Insufficiently protected by their own artillery, they were exposed at short range to a thousand enemy "heavies" firing with a deadly accuracy born of long practice. Like an orchestra obeying the baton of its conductor, the enemy artillery made the murky nights flicker into spasmodic daylight, while the air roared with the thunder of numerous explosives and screamed with the shrill flight of a myriad shells; and the earth shook and trembled with the shocks of endless concussions. "Verey" lights cut star patterns in the sky and cruelly exposed the quivering fugitives, who had ventured into the No Man's Land, to the merciless fire of the watchful machine-gunner. Hails of *minnenwerfers* fell on the shivering troops with a terrific crash, blowing into smithereens whole companies at a time. At intervals, a fusillade of *flammenwerfers* would find its target, dealing scorching death to the unfortunate victims. The

staccato bursts of the machine-guns contributed a new note to this symphony of death. The soft " pling " of the gas shell was yet mercifully unknown, but there were the established horrors of the rifle grenades, the underground mines and aerial missiles of death. Insufficiently fed and exposed to the rigours of a climate unknown to these children of a sun-baked clime, it is no wonder the sepoys occasionally wished for a " cushy " wound which would send him away to golden " Blighty " for a spell of rest and oblivion.

In spite of the experiences of the last war, our infantry is still uninitiated into the inner mysteries of scientific warfare. They have been kept out of the artillery, the armoured car sections, the tank corps and till recently even the machine-gun platoons. The key positions in the army are still held by Britishers and no Indian has yet risen to a position of real command. This policy of distrust is bound to recoil on Britain in a period of stress. On the top of emasculating a nation of nearly three hundred and eighty million souls, on the top of keeping them innocent of modernised weapons of war in spite of the urgent demands of national and imperial strategy, this policy of inaction would not even hesitate to appeal for Indian assistance in the event of war. Instead of making Indians happy and comfortable within the joint family of British nations or making them proud and valiant citizens of the Empire, Britain would exploit the charity of the Indian public and the necessitousness of the poor recruits, ignorant and untrained in the science of war as they are, to give fight to her potent enemies. This haphazard method of enlisting the sympathies of a politically disappointed India for serving imperialist ends cannot but fail in its objective of giving effective resistance to the Empire's enemies. Why

does Britain not avail herself of the immense man-power and of the plenitude of materials in India in a bolder, franker and more co-operative manner? Why must she take a narrow view of Imperial defence by regarding her own safety alone as the supreme consideration? Why should she not make common cause with her great dependency and stand up boldly against the aggressive totalitarian States of the West? If the answer is that India may avail herself of an opportunity to secede from the Empire or join hands with Britain's enemies, if she is strengthened in a military way, such an answer is self-refuted. It does not require much argument to prove that, in her present weakened condition, India will only bring upon herself the domination of one of the totalitarian States, if she either secedes from the British Empire or sides with its enemies. There is no Monroe Doctrine to protect her here, unlike Canada; unlike Ireland, her material resources and markets are sufficiently vast to be a temptation to empire-builders. Her case is more like that of the Australasian countries which, today, for reasons more of national safety than of any inter-imperial solidarity, are so much on the side of Britain.[5]

In the event of war, our troops will be like a flock of sheep without a herdsman, and will be slaughtered like one, if by force of events the guiding hand of Britain is withdrawn or stilled in the turmoil of her own struggles. In view of the fate of China at the hands of Japan, India's plight in a conflict with a well-armed country like Italy can easily

[5] The recent appointment of the Duke of Kent as the Governor-General of Australia revealed how public opinion in this continent is now keen on binding the ties with Britain closer. Two years ago, when a similar proposal was made, the "Aussies" flatly opposed it.

be imagined. Italy will be able to mobilise large numbers of her excellently trained troops and let them loose in the Middle East. It has already been mentioned how 600,000 men are concentrated in Eritrea and Ethiopia. It requires no great stretch of imagination to fancy half a million Italian troops attacking India with the aid of such Arabs as are willing to satisfy their Anglo-phobia at our expense or to fish in the troubled waters of Asia for their own benefit. The Indian army, as it exists today, will make but a pitiful show against the armed might of Italy.

People are not wanting who hug to their bosom the pathetic belief that Britain's military omnipotence is a sufficient guarantee of India's freedom from molestation. There is unfortunately little basis for this belief today when we realise the altered conditions of both the mechanics of modern warfare and the probable alignments of the combatants. Three-dimensional operations have practically annihilated distance in attack, while the supremacy of the bomber has robbed big navies of their hitherto unquestioned sway. As Commodre Charlton observes, it is illusory to depend on the naval arm any more, except to a very limited extent. In his excellent work, *War from the Air*, he describes how the German battleship, *Ostfriedland*, which was believed to be unsinkable and which had made harbour after the battle of Jutland even when twice hit by mines and damaged by repeated shelling, was sent to the bottom of the sea by aerial missiles, which did not even touch her but merely fell alongside and opened up large seams in her armour-plating by the force of their explosions. Later experiments, he tells us, have all pointed in the same direction. In the British *Army, Navy and Air Force Gazette*, Mr. Norman Walton went so far as to suggest that England

should abandon the Mediterranean and the Red Sea. "These long and narrow seas and the Suez Canal are difficult and expensive to hold," he says and suggests further that Malta, Cyprus and the Palestine should be abandoned. Brigadier-General Groves takes the same view. In his words, "There are only two nations bordering the Mediterranean which possess considerable air forces, *viz.*, France and Italy. Each could, by a ruthless use of these forces, sever our main artery of communications with the East in the narrow sea . . . . Each could render Malta useless as a naval base." It is interesting to note with reference to the last observation that at the time of the Czech crisis, the British Mediterranean fleet was ordered off from Malta to Alexandria and to Haifa, so as to be beyond the immediate reach of the Italian bombers. In the same fashion, the British home fleet left the harbour of Cromarty for an "unknown" destination, probably the waters of Scapa Flow in the north of Scotland.[6]

This realisation of the altered position of the British naval power accounts for the attitude of the British Dominions regarding their own defences. They have now learnt that it is risky to depend on the Mother Country. South Africa is arming herself to the teeth and has made a special appropriation of £10 millions for mechanical defences. The necessity for military self-sufficiency was stressed not only by Premier Hertzog, who is a "secessionist," but also by General Smuts who is pro-English. In a recent speech at Bloemfontein he declared that even if it costs millions,

[6] Signor Madariaga, in his *Disarmament*, observes that it is evident that the British Navy which had done good work throughout British history, should be considered to have played its last decisive part in the Great War.

Italian troop Concentrations.

Italian army and airbases

British troops here now.

British fleet Concentrations.

British Sphere.

Italian Sphere.

Pro-British.

Neutrals

Sanjak of Alexandretta

(Turkish Troops Marched here)

See reverse.

NEAR EAST IN THE NEXT WAR

NOTES ON THE MAP "NEAR EAST IN THE NEXT WAR"

. This map illustrates the position of Italy in the Near Eastern area showing the concentration of her troops in Eritrea, Abyssinia, and Somaliland. The map also shows the fortified bases held by Italy and England respectively in this area. The probable alignment of the local powers is also indicated. It is very likely that in the next War French and British Somaliland will be overrun by Italian troops and the safety of Perim, Aden and Socotra menaced. The position in the Suez Canal area is also very insecure from the British point of view as Italian troops from Libya and Eritrea will be easily able to occupy Suez Canal. This map also shows why England is so reluctant to allow an unfriendly Arab people to obtain control of Palestine. The distances by air from Abyssinia to the Indian coastal towns are also indicated. The strategic position of the Addis Ababa-Djibouti Railway is also evident from the map. The inset shows the strategical position of the harbour of Alexanderrata which has now passed under the control of Turkey, who is supposed to be friendly to France and Britain.

South Africa must look after herself. "I again say to the people of South Africa," he declared, "that if they want to hold what they have; . . . . let them be prepared in every way. We are not going through weakness and unpreparedness to allow every enemy to pluck South Africa as a ripe fruit." It may be mentioned that Minister Pirow is now in Europe to arrange large arms purchases. The situation in Australia is similar. When the leader of the opposition recently criticised the Government for lack of a clear defence policy, Mr. Lyons said that the militia would be increased to 70,000 men (Australia's total population, 7 millions) and 50 Lockheed bombers would be obtained from America. He also declared that special militia units would be organised to garrison industrial centres, and that from rural rifle clubs machine-gun units would be formed for the protection of bridges, factories and key defence areas. He also proposed to institute women's defence units on the English model, including ambulance drivers, and anti-gas and salvage workers.

There are current talks of keeping an additional English army in the East, either at Palestine or in India as a counterblast to the Italian manoeuvres. The number mentioned is six divisions or about 75,000 men. If these proposals are genuine, there has apparently been a switch-over from the old theory of beating the foe on the European front alone by the massed strength of the *Entente Cordiale.* Perhaps the British High Command now apprehend that aid may not be so easily forthcoming from Australia and New Zealand as in the last War, thanks to Japan's antagonism. It is possibly feared also that South Africa and Canada may elect to remain neutral, like Eire, which has already indicated her mind. But will six divisions (even if buttressed up

by the problematical Turkish assistance) be able to stem the tide of an Italian-*cum*-Arab advance? England lacks man-power in a very real sense today. India, on the contrary, has a plenitude of human resources which only require to be selected, trained and equipped to make a first-class fighting machine. The days are gone by when it was strictly *à la mode* to think that the Indian climes harboured no martial races and that even the spirited exotic was etiolated amidst Indian surroundings. After the last war, our Army captains do not ask themselves, when gazing into the sombre, introspective eyes of the hefty Punjabi, or the scintillating orbs of the wiry Mahratta, whether it is just a trick of the imagination or a fact that the Indians are members of a great but dying race! The flats of Flanders, the slopes of Gallipoli, the oases of Egypt and the waterless wastes of Mesopotamia have all been witnesses of such deeds of devotion, discipline and "derring-do" that even sceptical commanders and doubting war-correspondents have been moved to eloquent praise of the humble sepoy.

Those who believe that it is enough if we tie ourselves to the military apron-strings of Britain are innocent of the elements of the problem as it exists today. Even our cautious intellectuals have begun to realise that to a subject nation the foreign army is like a hangman's noose, which supports the body but crushes the spirit. However, there are two good reasons why we cannot rely on Britain. In the first place, as pointed out already, Britain can neither afford, nor be in a position to render adequate aid to India. In the second, it must be realised that modern wars cannot be fought by a hand-picked mercenary force but that they are waged by whole nations in arms, animated by a common spirit, fired by a patriotic fervour and directed at a common objective.

The professional soldier has finally given place to the conscript. The first principle of war is now not "business as usual," but a national regimentation of trade, agriculture and industry, with a view to mobilising all the available resources of the nation against the enemy. Unless the system of production and distribution in India is tuned to the requirements of a war economy, howsoever temporarily, India has no chance of political survival in a belligerent world.

That England is not unaware of this unity of interests between her and India is evidenced by the sedulous care with which she is taking advantage of every gust of popular feeling in this country to create disaffection against the totalitarian states. The Anglo-Indian press and the foreign news-agencies are all inspired to strike a deep anti-fascist note in their writings. To the Indian organs of public opinion, irrespective of their political colouring, the dictators are already anathema, and the Italian and the Japanese depredations have further exacerbated popular feeling against them. Our people have not only given proof of true democratic instincts by their pro-Chinese attitude but also of the habitual sympathy of one underdog for another. The exploitation of this popular feeling and mass psychology is England's golden opportunity. Time alone would show whether she is favoured by the gods with the good sense to use it.

CHAPTER IX

THE ACCOUTREMENTS OF WAR

INDIA'S supreme need of the hour is the immediate rehabilitation of her military strength and every effort should be directed to this end. Light-hearted tinkering with the problem will be worse than useless, as it is likely to create a false sense of security. As has been emphasised in the foregoing pages, modern wars are fought more by machines than by man-power. Without the implements of war and without sufficient ammunition to feed them we would have lost the race of war even at the starting point. It was Polonnius who said to his son, I believe, "Beware of entering into a quarrel, but being in, bear it that the adversary may beware of thee." How far are we capable of escaping without damage from even a quarrel which is not of our own choice?

Take the matter of rifles, which to the soldier is what oxygen is to the deep-sea diver. In the whole of India there are at present probably not more than half a million of this fire-arm. The regulation weapon, the Lee-Enfield (Mark III), good enough in its own way and day, is now somewhat antiquated. Modern tendency is to arm the infantry with automatic weapons which ensure quicker fire. Present-day conditions of warfare are such that individual firing with careful aim is practically superseded by group-firing at close quarters, while speed and the quantity of leaden death pumped at the enemy have become the main desiderata. The Americans are already turning to medium-sized automatic rifles and such weapons are being widely



Chinese soldiers firing with the Thompson sub-machinegun.

adopted on the Continent. Modern practice is to provide about four rifles for each one actually issued to peace-time troops. Judged by this standard, India will require a minimum of two and a half million rifles, with a group of up-to-date factories for manufacturing several times this quantity immediately the lowering shadow of war descends upon the nation. It may be sometimes necessary to arm the whole country-side against the invader. Readers of current newspapers may remember how the Chinese resistance was suddenly stiffened up when a stream of fire-arms poured in from Russia through the province of Suiyan. As will be shown elsewhere, our country has at present very poor facilities for the manufacture of automatic rifles. Further, the weapons with the police (who form a kind of recruiting ground for the army and a second-line of national defence) are mostly antiquated crocks.[1]

No time should be lost by the Government of India or with its permission by the Provincial Governments in setting up thoroughly modern factories at three or four selected places in the country where the raw materials (steel and good-quality wood for the stocks) are abundant and labour plentiful. With proper equipment and reasonable liabilities for patent rights, we should be able to turn out the rifles at a ridiculously low price, compared to the high rates charged by the alien professional merchants. The cost of two and a half million rifles should not be much in excess of Rs. 10 crores, at the outside. The management of the factories must obviously be under the control of the State, though ownership may in cases be allowed to be private. An excellent plan would be a sort of minimum-guarantee *plus*

[1] Through fear of terrorists stealing police guns, the rifling of the latter was purposely altered to reduce their range and efficiency.

profit-sharing arrangement, the State assuring a minimum return on capital (taking a nominal interest in the latter) and splitting the profits above the guaranteed percentage. This arrangement, while attracting private capital and enterprise, would obviate the risks of waste, extravagance and inefficiency ordinarily attendant upon public management. An industry of this magnitude will provide employment to thousands of artisans. That the hands of the latter have not lost their cunning is evidenced by the excellent duplicates of the service weapons which are surreptitiously manufactured on the Frontier and overtly in some Indian States, in large numbers, complete with markings and names.[2]

It might well be asked, " What would the factories do once the army orders had been executed and war productions slowed down? " The answer is, cycles and motor cycles. In our country, which has one of the world's biggest markets for bicycles, there is not yet a single plant for making them. We import annually Rs. 180 lakhs worth of bicycles and motor cycles. The rifle factories can be turned into efficient cycle-manufacturing organisations. In fact, the armament part of it can be used as a side line, as is done in most western countries. The B. S. A. firm of bicycle-makers, for example, make a popular brand of bicycles. They are also manufacturers of notable types of small arms.

[2] A story is told that when a Viceroy visited the late Nawab of Rampur, he was shown a gun which he very much admired. When informed that it was made locally he showed some scepticism. The Nawab thereupon asked His Excellency to loan him his (the Viceroy's) best English-made weapon. In a short time, the Nawab's armourer had made such an excellent duplicate of the foreign rifle that the Viceroy was unable to tell the original from the copy.

Such instances can be found in all advanced countries and one might recall the names of big firms like Lee-Enfield, Ivor Johnson, Raleigh and Humber in this connection. If this co-ordination of enterprise is arranged large external and internal economies can be realised and a permanent employment afforded to about a lakh of workers. England is able to sell her bicycles in India at the price of about Rs. 40 each, while Japan has put on the market inferior models at about half that price. It is not too optimistic to expect that our business men will be able to make serviceable machines at very competitive prices. The same will hold good as regards motor cycles, if we can usefully borrow the patent rights of a few well-known international models and manufacture them here. In India, which is a land of distances, cheap transportation is a crying need of the hour. Unlike the American or the German artisan, our members of the working classes can never hope to own automobiles and "fliver" contraptions like the German "Volkwaggen." A cheap bicycle is what our workmen can afford and with increasing industrialisation and urbanisation, the demand for these will multiply enormously. The use of motor cycles is also bound to spread among the middle classes with the gradual rise of standards of living. Owing to increasing mechanisation of the army and the police, moreover, there is likely to be a rising demand for motor cycles in the India of the future.

Let us turn now to the machine-gun, which is to war what a sheet-anchor is to the ship. It has already been stated how in the last War either side used about 100,000 of these weapons. Their importance has grown enormously of late. Mechanical improvements have been effected to make them lighter and more proof against jamming. Much

publicity has recently been showered on the so-called Brenn machine-gun designed by the Czechs. The real name of the weapon is Byrno, after the name of the town where the Czechoslovakian factory is situated. The machine is a light weapon adopted three years ago by the British Army in place of the Lewis and the Hotchkiss guns. It can be worked by a single man and fired from the shoulder on a tripod. Air-cooled and petrol-operated, it can fire 600 rounds per minute and has an interchangeable barrel for use when the other gets too much heated. It is reported that recently the English ordered 12,000 of these guns to be manufactured in Canada, by John Inglis & Co. of Toronto, as home production was not up to expectations.

The Brenn is an excellent weapon for infantry work. It has speed, portability and a reliable performance. India can do no better than copy this weapon here in quantities. About 20,000 of these guns should be immediately ordered and an ultimate supply of about 50,000 should be aimed at. For this purpose factories should be set up at strategic points in the country. The cost of 20,000 machines will apparently not exceed about Rs. 2 crores in all, equipment included. It may be mentioned here that the army authorities were able to produce the Vickers-Berthier machine-guns in one of their Indian factories complete with spare parts. It is only suspicion and the jealousy of the arms vendors which stand in the way of national self-sufficiency in this regard.

Besides the light infantry machine-guns, guns are required for aeroplanes, tanks, armoured cars, cavalry work, and for mobile machine-gun nests. The type of gun to be manufactured for each of the above purposes will vary in design, strength and quality; and suitable arrangements

will have to be made for their production by borrowing manufacturing rights from abroad. The problem presents few difficulties as all the raw materials are available in the country itself and skilled labour can be trained up without much trouble. The development of this industry is likely to augment employment among the non-agricultural population.

The problem is similar as regards artillery. At present the sons of the soil are as a rule being most studiously excluded from this branch of the defence forces. However, a nation without an indigenous artillery force and a powerful supply of cannon may as well fight with bows and arrows against well-equipped enemies. Lack of artillery power has been the bane of India throughout her history during the last four hundred years, ever since Babar humbled the Delhi Sultans at Panipat. In every important engagement from the first battle of Panipat to the battle of Miani, either the absence of an adequate supply of heavy guns or the treason of the artillery officers (mostly foreign mercenaries) has been responsible for the lamentable result.

We have already seen how in the world war the Allies used not less than 10,000 pieces of cannon in 1917. The Germans had an equal number, but their gunnery was, on the whole, superior and their dispositional tactics more shrewd, with the result that the damage effected by them was generally larger than that done by the Allies. The variety of guns used was infinite, but the principal sizes were the Big Berthas, the "five-nines" and the "six-eights" which played incalculable havoc. In a country of the size of India (where the obstacles against quick transport are many and large), it is necessary to have heavy concentrations of artillery and ammunition at every vulnerable point. As an

ultimate goal, the possession of 5,000 pieces of cannon of different sizes should be aimed at, but the immediate requirement can be confined to about half this number. The "test tube" wars in China and Spain have demonstrated that apart from range and hitting power, mobility over difficult terrain is an essential attribute of modern artillery. Mechanical transportation should be substituted partially for animal conveyance, although in our country conditions are not exactly similar to what they were abroad and what they are in China where draft animals are scarce. Recent improvements in the design of cannon have been noteworthy. For example, the Germans are stated to have perfected a gun which is able to register a direct hit at a range of nearly 25 miles and some of these have been installed at Ceuta and Algeciras. Automatic range-finders have made marvellous progress and it is now possible to effect indirect laying at a given target with monotonous regularity. Students of the last war may remember how the city of Antwerp, considered to be well-nigh impregnable by the Allies, was battered into an early submission through artillery action. The English at the early stages of the fight were so short of heavy guns that they practically impressed the Portuguese weapons into the war. To cope with the enemy long-range fire, even ponderous naval batteries were transported to Flanders for the first time in English history.

The manufacture of these guns (which are precision weapons of high quality) is a problem worth solution. Expert foreign assistance is, at least in the initial stages, unavoidable, and the English gun-makers are as good as any other in the world. Large-scale factories for making the barrels and assembly plants for setting up the machinery will have to be erected at two or three convenient centres in

the country. The State will have to undertake the task, as we have no private entrepreneurs to handle a work of this magnitude. The batteries should be concentrated at the headquarters of the five armies (of which more anon) located in the four cardinal points of the country and in the Central regions. The cost to the taxpayer on this account is likely to run into only Rs. 5 to 10 crores.

Tanks are practically an unknown quantity in India. A few are said to be maintained in the north-west but their incidence is negligible, as compared to the several thousands which swarm over France, Italy and Germany. Ours is a country eminently suited for tank warfare, as the lie of the land, particularly in North India, is mostly flat and easily traversed. Though from the immediate standpoint, for purposes of defence, aerial warfare is more important to us, in the later stages of any attack by enemy units further advance may take the form of fast-moving tank mobilisation, especially if resistance is forthcoming on land. The tank is a weapon developed out of military exigencies of trench warfare, but it is rapidly outgrowing the trenches and has tremendous possibilities in a future war, if we are to believe General Fuller, the British expert. About a thousand of these mobile, fire-spitting fortresses are a prime necessity immediately and another thousand should be added as soon as circumstances permit. The sizes of these tanks should be assorted according to the best military practice at present. It would appear that in the Spanish war, the huge German monsters gave a less satisfactory account of themselves than their more manageable Italian and Russian counterparts. The manufacture of these units can be arranged most profitably in the locomotive workshops mentioned elsewhere in this book. The cost of the initial instalment of thousand

tanks will probably be in the neighbourhood of Rs. 10 crores.

The policy of hush-hush, distrust and emasculation has not only done incalculable harm to the morale and the fighting spirit of the population, but has also resulted in a systematic suppression of all agencies of manufacture and commerce of arms by private enterprise. This policy of hush-hush and distrust has now served its purpose and outlived its usefulness, even from the standpoint of the British Empire. The time has now arrived for the Government to take stock of our resources for mobilising all the materials of war for defence. The enumeration of our internal agencies for the manufacture of war materials makes a most pitiful reading. There are only eight army factories, two of which only make clothing and saddlery. Gun carriages are made at Jubbulpore, small arms are turned out at Ishapore, while the Kirkee and Aruvankadu arsenals manufacture ammunition and cordite respectively. Although a few thousand Indians are employed as workmen by the Army, all the key positions are held by Britishers who take care to see that the secret processes and confidential designs and drawings are protected against prying Indian eyes. It is sad to record that even in these factories, the more delicate pieces of machinery are imported. It is imperative that complete Indianisation should go hand in hand with martial self-sufficiency.

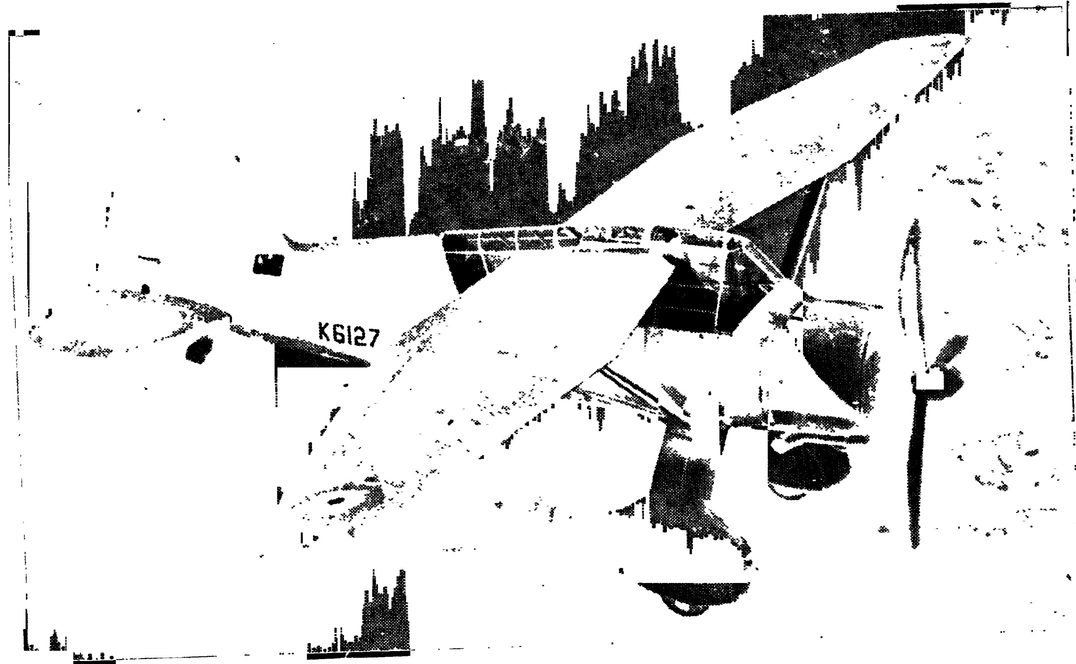
We have already seen how efficient air-preparedness is probably the largest single factor in national safety in the present circumstances of the country. The western powers are counting their first-line machines in thousands, while India has a few paltry squadrons to keep watch and ward over her susceptible frontiers. Even small countries like

Afghanistan, Persia and Egypt appear to have got ahead of us in the matter of aerial preparations.[3] We, on the contrary, unmindful of the growing menace to our lives and homes and of the swelling volume of international bellicosity, are living in a fool's paradise. In India we have several minor advantages as compared with Britain in regard to aerial defence. We are farther away from the storm centres and we are essentially a village community. Our political existence, moreover, is not so bound up with big cities, as England's is with London, for example. Our population is inured to hard life, open-air conditions as also to intense suffering by famines and floods. The joint family system and the availability of a village shelter for most town-dwellers (even though it be for a short while) is another factor in our favour. But the danger from air attack cannot be minimised. The horrors of the high explosive, incendiary and gas bombs are too real to be lightly ignored. Even the few cities on our western coast may suffer such serious casualties that a panic might easily spread all over the land, as we lack the mass discipline so essential for organised defences and so prominently in evidence in western countries like Germany and France. The air raids might induce a spirit of despair and defeatism and paralyse the domestic defences on the social front. The only way in which it may be feasible to neutralise, partially at any rate, the effects of such air attacks, is to scientifically organise the air-raid precautions, and to meet the enemy

[3] Recently it was announced that Afghanistan was buying a large number of aeroplanes from Russia and Germany. It may be mentioned that even a small country like Siam has a larger indigenous air-force than we have, while Egypt is planning for an air-force of no less than 500 planes!

in the air on terms which will seriously hamper his operations.

The demands of our air defence are, thus, so peremptory that they do not brook any delay. A first-line force of 1,000 machines should be visualised as the immediate requirement, with 200 squadrons of 2,500 units as the ultimate pre-mobilisation standard. Of the equipment roughly half should be pursuit and combat planes of the most up-to-date type, rapid in flight, quick in manoeuvre and devastating in fire effect. The rest of the air arm should be bombers, transport and observation planes. India is lucky in that she can draw gratuitously from the dearly accumulated international store-house of aeronautical progress and avail herself of the latest devices, instead of wasting her finances on obsolete models. Of all the nations in the world, the people with the finest aircraft on the skies are the Americans. Even advanced countries like France and England are not ashamed of taking out licences for internal production of American designs. India can do no better than take a leaf from the books of these countries and copy their most popular models. Most famous among these are the American Lockheeds, the Boeings, and the Seversky pursuit planes, and the German Dorniers and Messer-Schmidts. The German fighters are said to reach a speed of nearly 400 miles an hour with a range of 1,000 miles and a fire-effect of 4,000 rounds per minute. The Boeing bombers are wondrous monsters of the air, weighing 16 tons each and able to fly 300 miles per hour, even when fully loaded with scores of 2,000-lb bombs. In the realm of troop transport, the Douglas machines apparently take the palm. The Germans now lead the world in the quantity of their aerial equipment. As regards its quality very little



New Type Monoplanes for special trial flights for the Royal Air Force.

information is allowed to leak out; but it is so efficiently organised and that too within such a short time (about 4 or 5 years) that to a nation which would arm at a breakneck speed, Germany's example is as a beacon-light.

The connection between aeroplanes and the automobile industry is very close. Except to some extent in America, it can be said that in all the leading countries of the world, aero-engines are manufactured in motor-car factories.[4] Alas for India, we do not yet possess an automobile industry, with the result that we import annually over 10 crores worth of motor cars and accessories. Automobile production, in this mechanical age, is the hall-mark of industrial modernism; its lateral ramifications are immense, and its technical impulses far-reaching. The motor car is to military aviation what the bicycle is to the small-arms business. In both cases, the transport industry plays the part of a foster-parent to the defence service. It is needless to emphasise the urgency of making our country self-contained as regards road transport, even in the same measure as in rail transport. Some rather juvenile and ill-equipped efforts to produce motor cars in the country have been ridiculed into a collapse by powerful alien interests. Here again State patronage is of supreme importance. It is, therefore, a happy augury that the Congress has taken up, among other things, the question of an automobile industry in India, at the instance of Sir M. Visvesvaraya, the ex-Diwan of Mysore and a member of the National

[4] In this connection, it may be mentioned that leading automobile firms all over the world, like Fiat, Renault, Mercedes-Benz and Skoda are all principal makers of aero-engines. In England, as mentioned elsewhere, the Shadow Factory Scheme is run entirely by motor-car firms.

Planning Committee. When one remembers that Ford started life as a repair shopkeeper and Lord Nuffield as a cycle mechanic, we need not despair of putting India on the automobile map of the world. A few years ago, who could have thought of motor tyres being made in India? Yet today there are three efficient tyre factories in the field although two of them are of foreign ownership. Our people have usually been pictured by foreign critics (who were not often disinterested) as dreamers, mystics and lotus-eaters steeped in an enervating mixture of fatalism and *insouciance*. Yet today, we have, in the production of sugar, cement, cotton textiles, iron and steel, and paper, made such great strides that a new faith has dawned on the Indian business world. The lessons of modern Japan, socialist Russia, and democratic Czecho-slovakia are full of encouragement to us. Czecho-slovakia, in particular, when it was under Austrian hegemony, was backward and poverty-stricken; but within a few years, thanks to assistance from France, it became one of the most progressive industrial nations of the world. The great Skoda works in Bohemia, which had affiliations with the French firm of Schneider-Creusot, now make not only excellent automobiles but tanks, artillery, munitions and aircraft.[5] The Japanese have similarly started making their own pleasure cars (the Datsun) and Diesel trucks and charcoal burning buses in factories, which also turn out much mechanised equipment for the war office.

[5] Recent reports indicate that the Czechs have emancipated themselves from French control. The French manager of the Skoda works has been dismissed and there is talk of Krupps taking over the management of the works. It may be remembered that the French military advisor to the Bohemian army was recently asked to leave the country.

No time should be lost in establishing three or four large-scale motor-car factories of the most up-to-date type, in selected parts of the country where iron is abundant and where cheap mechanical power (white or black coal) is available. The State of Mysore is an ideal location as the Bhadravati Iron Works are close by and hydro-electric power can be tapped. The Bihar iron mines and the vicinity of Jamshedpur suggest another siting for the industry, while the west coast of Bombay will also be suitable, because of cheap power, provided iron ore is found near the region in adequate quantities. To some extent, the enterprise is handicapped by large gaps in the geological survey of the country. There are probably large deposits of ferrous material in various parts of the country which have not been located by official survey, as was recently shown by the accidental discovery of big seams of iron in the States of Mandi and Bastar and more recently in Sind. Hand in hand with industrial development should proceed the acceleration of geological and mineralogical surveys in selected areas. Power development again is a *sine qua non* of successful industrialisation, as any tyro can tell us. So far as the automobile industry and the munitions industry are concerned, their significance has been so amply demonstrated everywhere, that the necessity for speed needs no emphasis.

The auto-car factories need only be medium-sized plants, as it has been proved by Japanese experience that efficient production is possible with a turnover of only about 5 to 10 thousand cars a year. The ruling prices in India are all too high for the capacity of the people and hence the private automobile has been essentially a rich man's toy. In a recent statement by Sir M. Visvesvaraya, it was

clearly shown that the actual cost of production of the autocar plays a comparatively small part in the final buyer's price, which is unnecessarily inflated by transport charges, agent's commissions, import duties etc. With a decrease in cost and improvement in the technique of production, the vehicle must become accessible to the middle classes and large numbers are bound to be in demand in the future in this country. The business conveyance, the bus and the truck must all be produced in India, since in this country of long distances, at present large quantities of them are being imported at ridiculously high prices from abroad, and enormous profits are being made by both manufacturers and middlemen. In Germany and in Japan Diesel-operated trucks are now in mass production. The latter country, in view of its lack of petrol resources, is also utilising charcoal gas for driving its town buses. In our own country, oil resources are not plentiful and the present petrol-powered road services are so uneconomical (*vis-à-vis* the railways), that they are enjoying only a hand-to-mouth existence. Charcoal, on the contrary, is cheap and universally available and should be provided for all normal commercial road requirements, especially where high speed and great efficiency are not required.

The automobile factories whose genesis has been sketched above somewhat elaborately will manufacture all the aero-engines needed for both commercial and military aviation. Manufacturing rights of up-to-date types of heavier-than-air machines will have to be borrowed from America and England and production started with the least possible delay. The over-all cost should be lower here than in western countries, in view of the comparative cheapness of labour and raw materials. Large-scale production also

will be a cheapening factor, as mass production radically cuts costs. For example, the English Sunderland boats cost £50,000 and upwards, but the American Lockheed Electras cost only £15,000 each, though the latter are superior in power and performance to the former. In India, if production is well organised and a long-term schedule is worked out, the cost of a bomber should not exceed £10,000 (Rs. 133,000) and that of a fighter about half that amount. If home production cannot be speeded up, reliance will have to be placed on purchases of machines from abroad. Germany and Japan are the only countries in the world whose manufacturing costs of aeroplanes are reasonably low, but unfortunately India cannot be their customer for obvious reasons. American prices are often absurdly inflated by profiteers, while most of the European producers are busy with their own requirement schedules. India is thus largely thrown upon her own resources, which have yet to be marshalled and effectively organised. This is a task for the future. A first step would be to compel all first-class internal mail to be carried by air. We are already spending about Rs. 20 lakhs in subsidising aerial transport companies which are mainly owned by non-Indians.[6] Our meteorological organisation, whose service is gratuitously available to the alien navigators at the cost of the Indian taxpayer, is excellent. The ground organisation is good as

[6] While the Indian National Airways and Tata's Air Services are mainly Indian in ownership and personnel, the Indian Trans-continental Airways is owned to the extent of 51% by the Imperial Airways, the balance of the capital being contributed equally by the Indian National Airways and the Government of India. There is a proposal to increase the capital of the I.T.C.A. from 7 lakhs to 32 lakhs, consequent on the "all-up" air mail scheme. It is urgently necessary that this Company should get into Indian hands.

far as it goes, though it is scarcely comparable to the well-equipped aerodromes of England, America or Germany, where directional flying by wireless is almost universally catered for.

Civil aviation is an indispensable adjunct of an air defence programme. About a hundred flying clubs with well-laid-out landing-grounds and hangars should be scattered about the country. In British India there are about two hundred district towns and in State India about a hundred more. One hundred of these should be selected as the headquarters of aero clubs and supplied by the Government with two machines apiece, one a small plane suitable for ordinary amateur flying and the other an up-to-date one for advanced instruction and parachute practice. A system of ingeniously designed subsidies (which will achieve maximum results with minimum cost) is indicated as a stimulus to air-mindedness which seems to have become extinct since the days of the Ramayanic wars, when our poets sang of *vimanas* which swooped down from the air carrying destruction to the demon enemy or glided over the clouds with their divine load, making earthly contacts at propitious moments. The flying clubs are the recruiting grounds for the air force in times of national peril and every encouragement should be given to amateur flying. Every advanced country today has qualified fliers in tens of thousands, but in India we have a few scores only (550, to be exact), many of whom are, moreover, elderly and unsuited for military aviation. The airmen must of necessity be young and unencumbered persons, full of hope, daring and scorn of death. The late war produced such men, who have won undying fame for themselves. One has only to recall the names of Richthofen (of the renowned

Circus), Boelcke (who won sixty victories before he was killed in an accident), De Havilland, Balbo (the veteran Italian), Nugennesser (the French ace) and Major Bishop of Canada, to realise how much the development of this new weapon called out the best and the noblest among the fighting spirits of the nations. For 1,000 first-line machines, we will require 3,000 air-force pilots. To train up this number initially, two or three aeronautical colleges should be set up at convenient centres, the personnel for training being selected from among the promising amateur fliers of eligible age, physique, education and record.

Every glider is an airman in embryo and this is realised nowhere else more than in Germany where currently there are 50,000 regular gliders. In India every district town should have a gliding club, with its own equipment of ground machines and instructors, provided at the expense of the State and located at suitable elevated sites. Three hundred such clubs can harness much local enthusiasm among the people and train up within a year or two several thousand experts in the art of gliding. Honourable mention may be made here of the efforts of Pandit K. K. Malaviya of U. P. in agitating for both gliding and aerial training. Unless, however, Governments in India take up this question of aeronautical training both for commercial and (ultimately) defence purposes, no substantial results will be achieved. The stocking of the flying and gliding clubs will not cost the Governments more than Rs. 2 crores to begin with, with a proportionate recurring expenditure on subsidies to pilots and gliders. That our young men (especially the educated ones) will make capable fliers from a military standpoint cannot be seriously doubted; it is entirely a question of training. What is lacking is

organisation, opportunity and, lastly, a realisation of the urgency of defence. India must now have leaders with vision, faith and determination; men who can plan with imagination and execute with daring. Subtle politicians and casuistic philosophers, who can debate nice points of laws and constitutions or can play upon the sentiment of the masses by making the time-honoured appeal of outworn creeds, have no place in the immediate pageant of coming events. For, what is required is action rather than words, execution rather than theorising, and fervour rather than mere sentiment.

India at present possesses no munitions industry. It is not because gun-powder was unknown to the ancients. We find detailed instructions regarding a muzzle-loading gun, called *nalikastra* in the *Sukraniti* (*circa* 300 A.D.). The Chinese used gun-powder long before the birth of Christ, but only for pyrotechnic display, not for warfare. The perfection of explosives as a weapon for the destruction of life is *par excellence* a European achievement and Europe's current hegemony in world's affairs is due, to no small extent, to the clever and ruthless exploitation of this achievement. The manufacture of munitions goes hand in hand with the development of heavy chemical industries, especially nitrogenous and sulphurous products. If India were to become self-sufficient as regards her ammunition supplies, she must develop apace her chemical industries. At present, there is practically no important Indian company concentrating on this vital line of business. A foreign concern (Imperial Chemicals) has obtained, through the shape of a lucrative monopoly, a vice-like grip on the domestic market. The tentacles of this alien octopus should be relaxed by legislation or by agreement and State

encouragement afforded to indigenous manufacture of essential chemicals. The country's natural resources should be put in entire commission and efficient plants also set up for the fixation of atmospheric nitrogen, as has been done in most advanced countries. Recent advances in the manufacturing of explosives have been remarkable and it is obviously a matter of life and death for India to keep abreast of this progress.[7] Glycerine is an important element of munitions. This stuff is a by-product of the soap industry. Till recently lakhs of rupees of unsaponified refuse were thrown away by the soap-makers. The Tata plant at Cochin now makes a few hundred tons in a year but export the material to Germany under a long-term contract for lack of a domestic market!

The horrors of chemical warfare are still largely unrealised. Of the poison gases actually used in the last War, the world is somewhat familiar. Chlorine compounds (phosgene, chloropicrin and so forth) were the earliest to be used. These attacked the lung tissue and the poor victim retched, coughed and suffocated. He died amidst his expectorations with a blue and bloated visage and a bloody froth in his mouth. The yellow cross or mustard gas, which followed, was more insidious, more cruel and more murderous. It was not really a gas but a volatile liquid, which killed slowly but surely every animate thing which came into contact with it; it burnt, blistered and rotted away all living tissue. Its maximum effect was a cruel torture

[7] The Moscow Radio Station recently broadcast information about a new type of explosive bomb, manufactured in Germany and used in a raid on Barcelona on the New Year's eve. The splinters from this bomb travelled a distance of 160 feet and killed even men who had fallen flat on the ground and covered themselves up.

and agonising death, its minimum result was a prolonged misery and abbreviated life. The scientists are now talking of other poisons which would destroy the nerves and unhinge the brain, which would send whole cities and armies permanently to the land of Nod. To Professor Lewis of America goes the doubtful credit of having discovered a new arsenical solution (Lewisite or the Dew of Death), one part of which in ten million times of air is sufficient to render men *hors de combat.* Other chemical weapons for mass murder are being forged in all war office laboratories. Dupont de Nemours have put on the market a new kind of TNT which while about four times as potent as the war-time product, is so safe that it does not explode even when knocked about with a sledge-hammer. The Germans are credited with the discovery of a mystery ray which will carry invisible death to distant objectives. Every war office laboratory is humming with the noise of sizzling test-tubes containing millions of virulent disease germs to be let loose on the enemy population in war. To Indians the use of the hideous devices of chemical warfare may appear heartless. But our defences at least should be above reproach. Millions of gas-masks should be prepared and stored about our western cities. It is a minor blessing that the vast majority of our peoples belong to the country, and the crowded city population is comparatively small; but this city population requires protection and at least 50 million gas-masks should be prepared and distributed free to the poor and at cost to the well-to-do. The current price of a fairly serviceable mask is estimated at 10 shillings.

That our workmen are quite equal to the task of manufacturing good quality ammunition was proved during the war when the large factory near Calcutta made by the

million the famous Dum-Dum bullets. Large factories should be immediately set up for turning out munitions of all kinds. Unluckily, there is no local supply of mercury which is so essential for making detonators and fuse caps. The world's supply of this precious metal is confined practically to Italy, Spain and, to a smaller extent, the U.S.A. India will have to obtain large supplies of mercury-fulminate and store them up for future needs. We are more favoured by the gods as regards "murderous manganese" which is found in servicable deposits only in India, Brazil and the Gold Coast. In the form of an oxide it is used to strengthen and temper steel used in shells, bullets, rifle barrels and other high pressure contrivances of death. Our local supply found in Bihar, North Madras, Central Provinces and some Indian States is in the hands mostly of foreign companies who have not scrupled to obtain concessions for the proverbial song and to exploit them through specially laid railways subsidised handsomely by the taxpayer. Sir T. Holland pointed out, as early as 1905, how the export of manganese was a great economic loss to the country, which could greatly benefit itself by using the ore in a large-scale steel and chemical industry. Although 33 years have gone by, no part of the ore is used in India except a little by the Tatas.[8] It is essential that the control of this vital war-stuff should be vested in the State which should conservatively exploit it, with an eye on the distant future. Another primary war metal is nickel, of which we possess practically no supplies. Canada produces 87·1 of the world's output of this metal which is used for multifarious purposes in the armament industry.

[8] Out of over one million tons of manganese ore produced in our country, only 60,000 tons are used by our steel industry.

It is needless to say that liberal stores of this metal also should be laid up.

Copper and aluminium complete the tale of essential war metals. The former is produced in moderate quantities (some 6000 short tons) inside our borders by a company with foreign affiliations, but it is highly probable that further deposits may be located by an efficient survey especially in Sikkim and the Nellore District of Madras. Utmost despatch is necessary in augmenting our domestic resources which are insufficient to meet even our peace-time needs, which are the heaviest per capita, in the world. It is well to remember that war-time pressure in Germany became so acute in 1916-17 that the war-lords were forced even to pull up electric cables, melt statues and break up domestic utensils. It is believed that the 1918 collapse of the Central powers was in a large measure due to a copper famine. In India, it is a pity that the irresistible propensity of commercial foreigners to grab iniquitous privileges, euphemistically called "Concessions" has scared those of our ruling princes, whose political attitude is not perennially horizontal, into clamping down a tight prohibition on mineralogical investigations into their territories. These princes are content, like the the affluent in the Pindari days, to leave their wealth buried in the bosom of mother earth, hoping for more propitious days to dawn.

Aluminium which is so useful in the aeronautical industry, is fortunately as widely distributed as clay, from which it is extracted by electrolysis. Our production was somewhat negligible, owing to lack of cheap electric power, but the recent development of hydro-electric schemes has given a fillip to this infant industry. It seems imperative that efficient state-assisted factories should be established

and production on a large scale accelerated. All demands of our aeroplane factories and the peace-time trade should be met in the near future from domestic supplies of baüxite.

A sad commentary on our national helplessness and lack of enterprise is the fact that the lion's share of our commercialised mineral wealth is slowly but steadily being drained out of the country. Gold mining is still almost a European monopoly. Foreign companies also hold a large interest in the iron mines. As already mentioned, copper, manganese, tungsten and magnesite are largely under foreign exploitation. A definite halt should be placed on these inroads on our industrial self-sufficiency. The key metals should be controlled directly by the State, the proprietors being compensated on the now well-accepted principle of "Cost-less-depreciation" (and not on the basis of capitalised profits).[9] An embargo should be placed on further mining concessions to foreigners and a system of royalties devised, by which excessive profits would be pruned down to the benefit of the public exchequer. At present the mining dues paid by some of the companies are scandalously low, especially in British India. For digging out and exporting manganese ore, for example, the British "Indian" firms pay about 0-1-6 to 0-2-6 per ton, while in the Indian States the average royalty paid is two or three times this figure. Legislation should be enacted to prevent mining shares being transferred to non-Indians in future, in those cases where private control is permitted. This inhibition is essential to the vital interests of the country.

[9] This was the principle adopted by the Mexican Government when it expropriated the alien oil companies who had practically monopolised Mexican oil production.

Our anti-aircraft arm is like snakes in Iceland, "*non est.*" It is clear as daylight that without efficient anti-aeroplane guns many of our strategic points will be highly vulnerable from the air. It has been mentioned how military objectives like important railway junctions, locomotive sheds, bridges, and essential public utilities are so defenceless that even an attenuated enemy attack can inflict serious havoc on them. The only ways in which our cities can escape complete extinction are those provided by efficient anti-aircraft measures. Cities like Bombay, Karachi and Calcutta are especially vulnerable. Bombay island, for example, can be severed from the mainland in a few minutes after which its million inhabitants will be at the mercy of the enemy bombers and landing parties, unless efficient A.R.P. arrangements exist locally. Similarly, if Calcutta is cut off from the rest of India by the destruction of the Hooghly bridge, its fate will indeed be a terrible one, if no anti-aircraft defences are arranged nearby with unlimited supplies of chemicals, ammunition and food-stuffs.

Powerful anti-aircraft weapons of the latest pattern must be installed at all these vital points and local volunteers trained in their use. The big cities, especially on the West coast, must have regular squads of air-wardens equipped with an efficient and adequate supply of decontaminating and fire-fighting apparatus and ambulance facilities. The English 3·7″ gun is supposed to be effective up to 18,000 feet and several hundreds of them must be installed at necessary locations, especially around the local fortifications, water works, electric generating stations, and hospitals. Big cities like Bombay and Karachi, whose means of communications are restricted in number and variety must have many batteries available at an instant's



The English 3·7″ anti-aircraft gun stationed in London in Sept. 1938. Note the highly complicated machinery which has over 3000 parts.

notice for their defence. The cost of providing these weapons may be modestly estimated at ten crores of rupees. Recently some doubts have been cast on the efficiency of the English 3·7″ and French 77 m.m. guns on account of the fact that they are ineffective against aircraft flying low and executing what the French call the *vol rase.* As a result, a heavier weapon of 4·5″ calibre has been designed for the English A.R.P. and is stated to be in mass production.

In a case of large-scale fighting unlimited medical assistance is a prime necessity. In our own country, we have probably the smallest number of qualified surgeons and physicians in any civilised country in the world, except perhaps China. It is imperative that a network of medical institutions be established throughout the country, turning out doctors by the thousands. The shackles of foreign chemists which now bind us should also be burst. All the essential drugs and chemicals can and should be produced within the country. An indication of our sorry plight lies in the fact that we import even the surgical cotton bandages and sterilisers for our hospitals. In the coming Armageddon, when the slaughter and mutilation will be computed in millions, a shortage of surgical appliances will be nothing short of a national disaster. Witness the pitiable condition of China today in this respect. Urgent steps should be taken to set up State-assisted factories of these medical paraphernalia. The same can be said of the supply of artificial limbs; for when the god of war stalks across the land, he is apt to leave plenty of torn limbs and broken bones behind. Our nursing profession (which is here the most racially caste-ridden of all vocations) requires to be strengthened a hundred-fold. Associations and

schools for training lady nurses should be broadcasted throughout the country and thousands of young women equipped in this noble art.

To talk of India's sea power is to deliver a belated funeral oration. Gone are the days when our country used to be the mistress of the Indian ocean, when the gay "Tiger" ensign used to fly on one hundred and fifty men-of-war of the Chola emperors. From the very dawn of history, Indians appear to have been sea-minded. Asoka's missions travelled in lordly Indian merchantmen to Egypt and to the Greek archipelago in the west, to the sea of China in the east, and the sea-girt isle of Ceylon in the south. His sons had active naval relations with the Kings of Antioch. The west coast has consistently sustained, till recent times, a brisk maritime trade with the Persians, Moors, Egyptians and the Syrians, large bands of whom found a ready home on our hospitable shores. It may be mentioned that even Sivaji had 200 men-of-war. In South India, the Pandyas entertained a Roman trading colony. But only under the Chola Kings of Kanchi and Tanjore did the sun of our naval glory reach its zenith. When Raja Rajendra the Great died after a reign of unexampled prosperity and achievement, he left an empire whose outposts extended to Burma, Sumatra, Java, Borneo, Annam and Ceylon. It is surmised that even the Incas of Peru and the Aztecs of Mexico received missionaries from India, as strong traces of Indo-Dravidian culture are in evidence in these countries. Rajendra's fleet was easily the biggest in Asia at the time and it is on record that the Emperor of China was eager to cultivate the friendship of a monarch whose prowess in war and greatness in peace resounded throughout the length and breadth of even distant Cathay.

Hindu influences spread far and wide in Asia, not through commercial exploitation, slave-peddling or political aggression, but through the limpid channels of art, culture, religion and learning. Subsequently, a vigorous trade in spices was also conducted with Europe through the Venetians and the Moors and it is recorded by Pepys that the contemporary British, who were not too well-supplied with the good things of life, used to gulp the strange delicacies of the East with the same avidity with which the Congo bushmen of today munch common salt, when offered to them by thrill-seeking tourists.

But alas, with the incursion of the hungry Islamic hordes from the north and the rise of Moorish potentates in the west, the flower of the Hindu sea power wilted and withered. Hand in hand with our political freedom, disappeared our maritime glory. Today we possess no navy worth the name; thus yielding priority even to Australia, which with about 2 per cent of our population and about a tenth of our resources, is still able to claim to itself a navy of some magnitude and efficiency. We have already seen how even a poor country like Egypt is planning to spend about £30 millions on her navy. The recent attempts to equip India with four escort vessels at a cost of some half a crore is scarcely worth mentioning. It is probably not feasible for us to provide ourselves with a fleet of super-dreadnoughts whose cost, as judged by the recent American tenders, runs to five or six millions sterling each but we can build "pocket" battleships like those of the *Deutchsland* class, so popular with the Germans.[10] We should have at least five of such ships, which may cost us the best part of six

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or seven crores if the building is done in our own land. A supply of smaller surface craft, small cruisers, destroyers, minelayers and sweepers, and gunboats in considerable numbers is a supreme desideratum. Their number can be collectively put at a hundred and the cost will run to about fifty crores. The recent Egyptian purchases indicate that a mine sweeper will cost about 15 lakhs of rupees, a torpedo boat about 6 lakhs, and a destroyer about 50 lakhs. It is possible, however, that considerable savings on these figures can be achieved if organised ship-building is arranged here.

Another sea-arm, which is urgently to be provided, is the submarine. A nation which is weak in surface craft and which is unlikely to take the offensive at sea can protect its commerce and its shores by underwater equipment, which will seriously menace enemy naval units and harass enemy trade. The provision of about 50 submarines is not an extravagant objective. Their cost which will amount to a considerable sum (possibly another 10 crores of rupees) will be well worth the result. In this connection the German practice of building submarines of small tonnage is to be preferred as our craft is likely to operate mostly within easy reach of our own bases.

The construction of all these vessels should be accomplished in Indian waters. There is no paucity of skilled local labour here and the expert supervisory staff and technical advisors can be imported.[11] The arguments

[11] Observers all over the world are struck by the skill and daring of our fishermen, who riding a few pieces of wood (the *Katamaran*) travel many miles into the sea, rain or shine, fair weather or foul. These men, mainly from Malabar, Kathiawar, Cutch and Bengal, are employed in thousands, as lascars, by foreign ship-owners. They will of course be an excellent source of recruitment for our future Indian Navy.

in favour of such an arrangement are so overwhelming that they need no great emphasis. A largely planned naval construction will provide employment to a considerable labour and technical force and set in motion a chain of correlated business activity in the heavy industries. Today we are breeding a discontented army of unemployed young men from the *bourgeois* and labouring classes, many of whom would have found a profession in the army and the navy but for the stringent inhibitions placed on native recruitment to these forces by strong vested interests. The development of an Indian navy and a mercantile marine will, to some extent, solve a problem whose dangerous potentialities on the rising generations are beginning to be only too well realised.

The modest demand for the reservation of coastal shipping to Indian bottoms has been turned down with scant ceremony by our rulers in whose counsels the British shipping interests hold a powerful place. At least now it is to be hoped that wisdom would dawn on the powers-that-be, who ought to realise that Britannia's slipping sway in the Eastern waters is being usurped by powers who are scarcely friendly to her political interests. If India has to play her part in the defence of the Empire, she must have a dependable merchant marine. Our present tonnage (less than 1 per cent of the total employed in the trade) is deplorably small, thanks to powerful competitors whose commercial methods in the past and perhaps in the present have not always been very dignified or fair.

Some curious ways in which potent British shippers counter foreign opposition are worth detailing. When certain South-Indian patriots started the Swadeshi Steam Navigation Company 30 years ago, to run a service to

Ceylon, the well-established British concern promptly started a rate-war with the result that before the Indian firm collapsed, passengers were being carried not only free, but also presented with food and cheap fancy clothes into the bargain! In the recent fight between the Scindias and the Moghul Line for the Haj traffic, it may be remembered how the fare was brought down from Rs. 167 per head to Rs. 20, so that the carriers were actually out of pocket by Rs. 27 per pilgrim, as the Companies had to pay a capitation tax of Rs. 47 to the Hejaz Government. This sort of cut-throat struggle is not confined to India. Recently the American Eastern Steamship Lines tried to obtain a slice of the 80,000-passenger traffic to the Bermudas. The British-owned Furness Bermuda Line which controls the harbour of Hamilton (the capital) refused to allow the Yankee ships berthing accommodation in the city. The latter then turned to St. George, the second biggest town, but found that the existing British-owned hotel there would not cooperate. Consequently the Americans arranged a ship-hotel sailing, the passengers being allowed to use the ships for their local stay. This idea clicked and American tourists began to divert their patronage to their own ships. The British Furness Line thereupon prevailed upon the local Legislature to sponsor a Bill, naming the U. S. Line, and prohibiting ship-hotels from the harbours of both Hamilton and St. George. When the U.S.A. protested against the bill as discriminatory, the Furness Line itself adopted the ship-hotel plan and stopped the Bill. Local hotel-keepers who were hit, raised a wail. The Furness Line then changed the Bill to cover all ship-hotellers without naming any line in particular and had it passed in the Legislature. Promptly, after the Bill became law, the British Companies abandoned

the ship-hotel programme, thus keeping their own land caravan-serais going, but preventing the Yankees from poaching on their Imperial preserves! If the British can play such quasi-legal tricks with powerful America, their influence on Indian waters can easily be imagined. Unless the people of India take up cudgels on behalf of their own national industry, the puny Indian merchant marine will have as much freedom of growth as the wood-shod feet of an old-fashioned Chinese girl.

Two million tons should be aimed at, as an immediate goal for our merchant navy. A tonnage subsidy of ten rupees a ton (costing two crores to the country) should be guaranteed. Coastal traffic including that with Ceylon and Burma and all mail subsidies should be reserved for Indian bottoms. That State assistance is strictly *à la mode* is borne out by the practice of most forward nations in the world. England itself, which owns 20 million tons of shipping, spends over £3 millions on subsidies to tramp vessels, besides showering on the principal lines various profitable mail concessions often at the expense of her voice-less Empire units. The United States last year spent 20 million dollars on direct financial assistance to her mercantile marine, which now amounts to 12 million tons. Nations like Germany, France and Japan disburse enormous sums on keeping their vessels ploughing the seven seas in search of merchandise. Germany is further spending largely on her "strength-through-joy" vessels which can easily be converted into troop-carriers, when the big guns start booming. In the Far Eastern trade, it is estimated that Europe and America spend nearly £20 millions in direct subsidies to shipping lines. Thanks to this spoon-feeding, countries outside the British Empire have increased their

gross tonnage since 1914 by over 70 per cent, while the British shipping has actually decreased by 8 per cent since that date. From a share of 50 per cent in world shipping 25 years ago, Britain has receded to a 25 per cent participation.

Nature has not been too niggardly to India in the matter of harbour facilities. Bombay has an excellent sea frontage which can take in the biggest ships afloat. Karachi, Calcutta and Madras have moderately efficient berthing arrangements for ocean craft. Much money has been poured into the Vizag harbour, which with a little improvement will make an excellent marine base. In the Chilka lake in the east and in Cochin in the west, we have Nature's bountiful gifts, two havens of refuge for storm-tossed vessels, when old Triton, the sea-god, corrugates his brow into an ominous frown, takes out his horn, and lashes the ocean into a tempest of fury. All these harbours need to be strengthened, deepened and fortified with a view to naval accommodation.

CHAPTER X

INDIA'S MAN-POWER

LET us take a look at our human material, the cannon-fodder for the army Moloch, who, like Bakasura of the Indian legend, gets more insatiable the more he feeds. A glance at the physiognomy of Europe today shows how the gatherings of mankind all over the world have become blotched with uniforms, thanks to a morbid accumulation of energy in belligerence, which is fomented by earlier outrages and which fails to find a vent in pacific directions. We rarely see the monarchs of the 18th century depicted in military guise. The fashion was for robes and jewellery rather than for the spurs and feathers of a warrior-king. But from the middle of the 19th century the military uniform became all-pervasive. The last War intensified the military element in the street population not only in Europe but in America. The khaki-clad swaggering figure, perhaps slightly tipsy and always amative, was a familiar sight in thoroughfares, parks, restaurants, and music-halls. The fair sex were in turn infected with a love for the martial rig-out, and various feminine auxiliaries paraded the countries in appetizing soldierly garb. When after the Treaty of Versailles, soldiering was forbidden in Germany, the Nazi and the Reichsbanner movements supplied the required colour. The loud-hued shirt became a prominent symbol of the massed strength of party gatherings. It would appear that if a country is to be in the vanguard of well-organised nations, it must have plenty of military and

semi-military uniforms strewn about its domestic landscape. In India, the native soldier in regulation dress is a *rara avis;* the only uniforms we generally see are those of the members of the English garrison, who strut about our cantonments in natty dhobi-treated out-fits, eyeing the brown humanity with a lordly superiority quite disproportionate to the three-shillings-per-diem pay drawn by them.

Till the 20th century, wars had been a marginal business, fought upon "fronts," the ordinary citizens living in comparative security behind the fighting lines. But aerial warfare and long-range guns have totally metamorphosed warfare. Propaganda as a war weapon, and the danger of social mutiny under war stress have now made the entire surface of a belligerent country a theatre of war. Civil liberty has, in a large measure, vanished in Europe, due to the need of getting everyone under orders, under oath, and under an inexorable military discipline. Each man's dress and insignia now practically indicate in some countries a function, an obligation and a preparedness. This militarisation of the multitude has reached today its high water-mark in the fascist nations. Like the hordes of Chengiz Khan or the human tornado of the Gothic invasions which overwhelmed Rome, whole nations are now on the war-path.

If India wishes to avoid another prolonged period of vassalage (this time) to a barbarous European empire, her virile and unlimited man-power needs to be mobilised and organised to the highest pitch of efficiency. In the quality of physical courage our men are not wanting. The tall, bearded Sikhs, the spirited Mussalmans of the Punjab, the clean-profiled Rajputs of Mewar and Marwar, the sturdy upstanding tribesmen of the

*Frontier, the diminutive but square-built Gurkhas, the noble-*looking Jats, the thin and wiry Mahrattas, and the dark, heavily-built men of Central India, are as well endowed with bravery as any other people in the world. The early victories of the Europeans in India were due not to want of spirit on the part of the Indians, but in a large measure to superior equipment, (especially in artillery) and better organisation, of the foreigners, supported by black treachery, divided counsel and lack of leadership in the Indian camp. The battles of Aliwal and Gujerat showed what stuff the Indian sepoy, when trained in scientific warfare, was made of. The reputation made by the Indians in the subsequent Burmese, Tibetan and Boer Wars has been brilliantly sustained in Flanders, Gallipoli and Mesopotamia.

Physical courage is a somewhat uncertain and elusive factor. An ordinarily intrepid individual is sometimes startled into pusillanimity by the mere novelty of attack. A Messai warrior who would face a charging lion with no better weapon than a spear, would bolt into the bush when an alarm-clock goes off. Explorers have recorded that the Congo bushmen, who hunt wild elephants on foot with bow and arrows and who bestow no great thought upon wandering in glades infested with gibbering gorillas, would scamper and hide when a gramophone record is played. How many of the fox-hunting squires of England (the unspeakable running after the uneatable, as Oscar Wilde said) would care to hunt the lion with a spear, from horseback, as do the Arabs in the region of the Begarrah and the Congo? In our own country, the heroes of many a tiger hunt are not the burra-sahibs, riding a *machan* or an elephant behind their various pieces of artillery, but the two-annas-a-day beater following a wounded feline with no

bigger weapon than an old kerosene oil tin. Our sepoys, who would face with stoic courage a hail of bullets from rifle or machine-gun, were somewhat shaken in Flanders by the unexpected onslaught of German "tin cans," and "whizz bangs" and a hundred other modern mechanical contrivances of slaughter unknown to the Indian military vocabulary. The steadfast and usually brave Senegalese troops, who were fighting shoulder to shoulder with the French at Neu Chapelle, broke and fled ignominiously when poison gas was released on them. Most pathetic of all is the tale of the 15,000 Russian infantrymen who had been sent over to the western front by the Czar in 1916. These had valiantly stood the racket of repeated German strafing, till General Nivelle ordered, as an experiment, the stupid advance of massed men into intense fields of fire when over 6,000 of their number were mown down. The remnants grumbled against this ruthless use of human lives and came out of the trenches, refusing to advance. Their retribution was swift and terrible. The defenceless men were surrounded by the troops of their Allies and literally massacred in cold blood, until not a single survivor of the 9,000 was left to tell the tale.

We have already seen how the Indian army consists of about 1,70,000 sepoys and about 60,000 members of the English garrison, rather appropriately called "the Army in India." The cost of maintaining one British soldier is at present roughly Rs. 1,400 per year; the corresponding expense for an Indian sepoy is about Rs. 400. Taking the annual Army expenditure at Rs. 50 crores, it is easily seen that the foreign garrison accounts for about Rs. 15 crores or about a third of the defence budget. In the New Deal with England, the cost of the "garrison" should be transferred to

the British taxpayer. If this is done the saving to the Indian exchequer will be over Rs. 15 crores and out of this an additional army nearly equal in strength to the existing indigenous forces can be maintained with facility. Apart from this the actual saving which can be effected through Indianisation, economies in troop transports and by tightening generally the reins of army expenditure, will be considerable. In this connection we can do no better than copy the Japanese, who have been keeping an army of over a million men in China for fifteen months at a cost of only £400 millions. For an English army of a like size the expenditure would have been at least twice this amount. It is urgently necessary that the peace-time strength of the Indian Army should be raised to 5,00,000 men, divided into five armies of about 10 divisions each. According to the above figures this increase of peace-time strength may mean only a slight increase in the present army budget of Rs. 50 crores. The five armies should be disposed as under, two in the west coast, one in the north, another in the east and the fifth in the central regions as a reserve. At present the bulk of the Indian forces is stationed in the North West. The Punjab, Baluchistan and the Frontier are strewn about with cantonments, bristling with barracks, parade-grounds, armouries, and administration blocks. This concentration of troops in one corner of India, giving the Army Headquarters a sort of lopsided stance, is due to several reasons. The Russian bogey was originally responsible for this north-western concentration as well as, in some measure, for the shifting of the Imperial headquarters to Delhi. When Russia became a war-time ally, and subsequently a mere stricken and chaotic geographical expression, the Afghan menace was painted large on the popular imagination.

When Afghanistan in its turn tasted the bitter pills of defeat and internal strife, a new bug-bear was created for the delectation of our militarists in the shape of the "Frontier Problem." Indian opinion has always held that the exaggerated threat from the poverty-stricken Waziri and Afridi tribesmen has been a sort of red herring drawn across the trail of Indian public opinion by imperial propagandists. Pandit Nehru was asked some time ago by an Englishman, as to what would happen to India if the British troops were withdrawn from the Frontier. The reply promptly came to the effect that immediately the "Tommies" were given marching orders there would be illumination and rejoicing on both sides of the Frontier. The bogey of a north-west invasion of India (when mind you, not a virgin or a rupee would be left in India but for our benign British buckler!) has been too much with us. It is high time it is given its *coup de grace* and accorded a decent burial. The troubles on the Frontier are easily understood, when we remember that, on one hand, we have a fanatical, impecunious and well-armed multitude and on the other, a disarmed, comparatively affluent and non-martial people. The moment the Frontier-men are elevated socially and economically and the moment the other side is organised in arms and infused with a new spirit, the problem will cease to be one of acute military concern. Doubters have only to remember that not only the Frontier but the whole of Afghanistan was ruled for nearly 300 years from Delhi; that even as late as three generations ago, Ranjit Singh smote the Kabulis hip and thigh back to the very gates of their city, with the result that the name of the Lion of the Punjab is still a holy terror on the other side of the Hindu Kush. The present ruler of Afghanistan has no evil design on

India. His seat on the throne is none too secure and he knows full well that ex-King Amanullah, basking in the sun-shine of Italian protection, is biding his time for a new bid to his troublous kingdom. The Shami Pir incident might have been a Rome-inspired feeler in this direction. In a war with the Fascist *bloc*, therefore, King Zahir Shah is as likely as not to be on our side and this is confirmed by the recent visit of the Indian Political Secretary to Kabul. As regards the Frontier-men, whose spirit of nationalism is not despicable, they only want to be left alone. In case a strong national Government is established in India, the tribesmen are likely to shed their suspicion and pugnacity and co-operate in the general defence and rehabilitation of the country. Persia, however, is an uncertain factor, as it has pro-Arab leanings and has been nursed into a sympathetic frame of mind by Germany and Italy. German experts are employed in considerable numbers in Iran and concessions for aerial navigation by the Luft Hansa line and for railway construction under German experts have recently been allotted. In case a Fascist-Moslem *bloc* is brought into being, our Makran and Baluchi borders will require considerable defensive measures. But the nature of the country and the limited resources of Persia make the task a comparatively easy one. Our main danger is from further west, where as already emphasised, Italy is gradually obtaining a vice-like grip on the Mediterranean and the Red Sea basins, and is threatening English dominance in the Near and Middle East. Mussolini the puissant lord of the land-locked sea and Mussolini the refulgent "Sword of Islam" together form a combination which is a potential danger to India of a serious magnitude.

In his more expansive moments the Italian Dictator claims that he can put under the colours as many as six million men at a time. Since Italy's adult male population is not sufficient for this, this claim implies that he has large potential recruits among his coloured subjects. From Abyssinia, Libya, Eritrea and Somaliland he can gather together excellent fighting stuff; for, the Moors of Libya, the Bantus of Somaliland and the Ethiopians have always been noted for their discipline and courage when given proper leadership. To these must be added the Arabs of the Hejaz, Iraq and various other principalities which are likely to join an anti-British and anti-French group. If India is to organise an effective resistance against this powerful menace, then it is clear that an army of 5,00,000 is totally inadequate. A reserve force of another half a million should be organised with arms and full equipment for this number. In the event of a menace to our liberties, this reserve should be immediately mobilised so that we shall have a million men ready to battle for our country's freedom and safety.

A million is an impressive figure but it is likely to prove a mere bagatelle in the case of a large-scale fight where, as we have already seen, the wastage is colossal. Even in the " test-tube " war in China it is estimated that the Chinese have lost the better part of a million men in about a year, while the Japanese casualties have been approaching the quarter million mark. The losses in Spain have been on a somewhat similar scale. In the recent battle on the Ebro river alone, both sides are said to have suffered a casualty of 100,000 men. If Italy is able to evade the British Fleet and land her forces in some strength on the Indian shores, then our country will have to mobilise

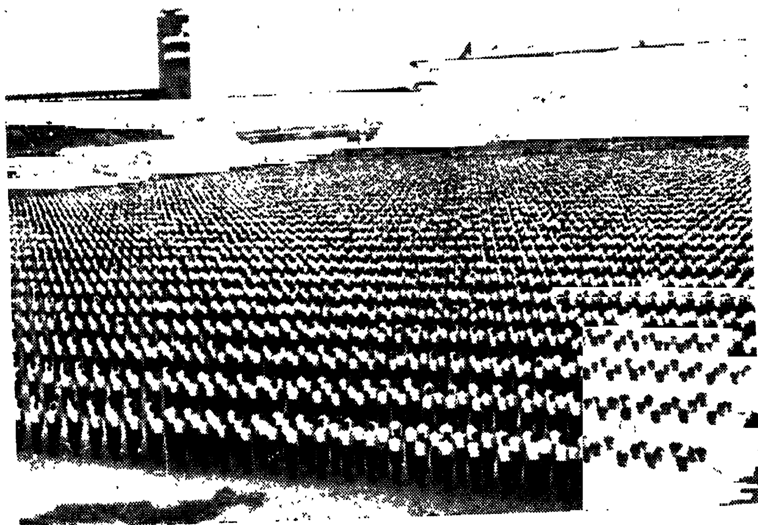
much more of her man-power. *The problem of energising (in a military sense) our impressive human resources is one which demands an urgent solution.*

Even countries which enforce conscription depend on extra-army organisations for supplementing their regular forces. We find in Italy, the Fascisti, a black-shirted volunteer organisation, which forms the saddle and stirrups by means of which Mussolini rides the Italian people as their Ducé. These are drawn from all walks of life, the leaders being men with a gift for command, usually with a good martial record. The incompetent group captains are eliminated by physical fitness tests like those which recently took place in Rome under the eye of the dictator, who himself went through all the thirteen events creditably. It is believed that the black-shirt membership runs into some millions. In Germany, the perfection of para-military organisations has reached its high water-mark. The most prominent among the latter are the famous Storm Troopers ("S. S.") whose organisation is on a voluntary basis and who are drawn mostly from the argicultural and the working classes. Largely composed of ex-conscripts, their discipline and training are commendable, while their officering has been planned on democratic lines, unlike that of the regular army whose commanders are mainly drawn from the old Junker families. The pick of the Storm Troopers compose the Black Guards, the well-known personal army corps of the Füehrer, who has achieved remarkable political success with their timely assistance.

A short time ago, Czecho-slovakia staged a massed display of her national solidarity through the quasi-military institutions which form her second line of defence. The event was the 10th Congress of the *Sokols*, the oldest national

gymnastic organisation in the world. The word "*Sokol*" means "falcon" and represents the popular conception of the traditional heroes of Bohemia when the country was under Hapsburg suzerainty. The *Sokol* groups helped to keep the national spirit alive and during the last war, large numbers of *Sokols* deserted to the Allied army. In a population of 7 million Czechs, the *Sokols* (of whom there are now 460,000), are a store-house of well-trained man-power for the professional army of 1,80,000 men. The *Sokols'* uniform is a dashing red and grey and their drilling is as perfect as it is possible for a voluntary force to have. They co-operated before the crisis with the army in a pageant of defence which impressed and enthused the half-a-million sympathetic foreign observers who gathered at the Congress. With the dismemberment of Czecho-slovakia, the organisation has lost its political importance, but it still remains an object-lesson to other down-trodden nations of the world.

The same type of extra-professional semi-military organisations is now found in most forward countries in the world. In Russia, the number of volunteer organisations is counted by the thousand and their membership by the million. In China, in Egypt, in Turkey and in almost every European country the idea of mobilisation of peace-time man-power is all-pervasive. In England the attempts to exploit this nationalistic urge has not been crowned with much success, thanks to the average Englishman's objection to any form of control, discipline and regimentation in peace time. Even as it is, the Universities and the patriotic urban and rural associations all contribute to keep alive the somewhat restricted enthusiasm of the British masses for martial activities.



A group of the Bohemian *Sokols* at their drill at Prague.

In India so far no systematic effort has been made to create a popular fervour for military service. Until a spontaneous enthusiasm is generated among the mass of the people, the problem of national security will be impossible of solution. The day is past when battles could be fought and won by handfuls of professional soldiers, some of whom might possibly belong to a different nationality altogether like the Swiss and Irish Guards of the French kings, and the Gurkhas of the Indian army. No mercenaries can stand without running into panic the dreadful massacres which are now called trench-fights at close quarters. The latter are possible because of the self-effacing enthusiasm, fierceness and heroism of the petty clerks, the small artisans, the humble workmen, and of many a "village Hampden" who, lifted with the *élan* of a great purpose, rushes to join up in the game of destruction.

In the life of a nation the essence of the past is the tincture of the future. Indian history tells us that we have been least successful in resisting foreign invasions when reliance was placed on hired armies whose strength and inspiration were not broad-based on the sentiments and loyalties of the people. But when national movements of freedom were set up among the rank and file of the masses, as was done by Guru Govind in the north and Sivaji in the south, the results achieved were nothing short of miraculous, despite initial setbacks, defeats and humiliations. In Palestine also we see how this intense patriotism gives almost super-human strength to an otherwise weak nation, which, with an adult population of only 300,000 men, is giving a battle royal to the concentrated might of Britain. The supreme need of the hour for India is, therefore, the *inauguration of a national para-military volunteer move-*

ment which will form a second line of defence of the country and which will prevent our people from

" . . . . bending low before the blast
And let the thundering legions past; "

but will make every mother's son in India shout a challenge, in the words of Scott,

" Come one, and come all! This rock shall fly
From its firm base as soon as I."

There are five lakhs of villages in British India. These should be organised into groups of 50 villages, each group comprising approximately 20 thousand people. For each group a competent gymnastic-cum-military instructor should be provided by the State with an efficient assistant. Ten thousand such instructors should be speedily trained up, preference being given to men with good general education, and experience in the University Training Corps or in the volunteer battalions. Since popular military training will be a part-time work, these instructors may be employed, when possible, in school-teaching or in similar vocations affording leisure. Each village group should supply two full companies of about 250 men. These will be trained thrice a week for two hours at a time at a central parade ground allotted for the group. The instruction will initially consist of physical training, drill, elementary tactics (taught orally) and handling of weapons (dummy rifles being used for the purpose). As the tuition progresses real firearms should be issued and efficient practice in aiming, shooting and care of weapons should be given along with a little more advanced initiation into strategy and tactics. The more promising and intelligent of the companies should be instructed in machine and anti-aircraft gunnery, the group

being equipped for this purpose with the necessary weapons and both blank and lethal ammunition. The cost of running each group should not exceed Rs. 5,000 a year, assuming that all incidental manual work is done on a voluntary and gratuitous basis. The recurring expenditure of about three or four crores will be worth incurring as well as the initial outlay which will amount (at 20,000 rupees per unit) to some 20 crores. If the training is carried out with efficiency and despatch we shall have, in a short time, a volunteer army of nearly 3 million men whose numbers will be distributed somewhat evenly throughout the country and who will form valuable auxiliaries to the regular army when trouble breaks out.

The structure of this volunteer organisation should be pyramidal; the village units should be co-ordinated into district units which in their turn will be concentrated under a provincial headquarters which will control, inspect, and guide the dispersed village units. The organisation will have its own specialised branches, like cavalry, a light armoured-car corps, tank squadrons and anti-aircraft battalions. It may be mentioned that in England, Mr. Hore-Belisha, the War Secretary, has extended training in the specialist branches to the Territorial Force also, so that at present the latter stands on a footing of equality with the regular army. Even auxiliary services like supply and transport, medical aid, and engineering can be dovetailed into the organisation on a non-compulsory and non-stipendiary basis. In the event of a resort to the *ultima ratio* by nations, the auxiliaries will merely step out of their civilian life into their appointed military posts without serious dislocation of public life. In the big cities which are specially vulnerable to air attack, air-wardens and

squads of assistants should be appointed, as in Germany, and trained in the art of aerial defence. The training should be rendered as realistic as possible by mock attacks and raids, and enlivened by mass parades, camps and competitions, which serve a useful purpose in reviving flagging energies and in focussing public attention on the crucial need of the hour. It may be of interest to mention in this connection how the British attempts at enlisting popular support for the A.R.P. schemes, resulted in a number of women being trained as pilots and air-wardens.

The name of the organisation should be an index of its national status. "*Sher-i-Hind*" (The Lions of India) appears to be an appropriate piece of nomenclature, since it will not suffer from the inconveniently pacific and un-Indian associations attached to the phrase "Congress Volunteers." The uniform of the "*Sher-i-Hind*" must be devised with care and forethought, for there is more in a cunningly contrived outfit than is dreamt of in the negative philosophy of erstwhile non-cooperators. *For one thing, the uniform is a great solvent of caste*, since men who get into the livery of national service cease to set much store on their pedigree or natal prerogatives. Standing shoulder to shoulder, inspired with the same high purpose and animated with the same lofty aspirations, they forget religion, community and race in the service of the Motherland.

In addition to this organisation, we must be equipped with rifle clubs in every important village, containing, say, more than a thousand inhabitants. These clubs will be inexpensive to start and to run and will infuse a spirit of preparedness and of gentle rivalry among the youth of the villages. In Russia such clubs (patronised by the patriotic of both sexes) are of universal occurrence and are stated to



Parade of a section of the New Women's Auxiliary Territorial Service in London.

have resulted in the teaching of the rudiments of firearms to millions of young communists. In our country even if one lakh of village clubs (each catering to about 50 members) is brought into being, within the short space of about a year, we should have five million enthusiastic youths with a nodding acquaintance with fire-arms exercise.

In the colleges and universities, military training should at once be made *compulsory*, for all those physically fit for it. It must be remembered the Cadet Corps of the English colleges are the recruiting ground for many officers of the English army. The present martial schooling given in the U.T.C. is somewhat amateurish and will not pass muster in the most elementary military school. It requires to be raised in quality and extended in quantity. In the pre-university teaching institutions also the emphasis laid on physical education and fitness has to be multiplied. At present, the physique of most of our students is of the C-3 variety. Thanks to a highly literary education, unhealthy surroundings and an impoverished diet, our younger generation of students is growing up in a physical degeneracy which would appear appalling, were it not so universal as to escape pointed notice. While we do not want to copy the American plan of turning our universities into big play-grounds with a few study-halls attached, we should urgently increase the opportunities of our students for participating in sports, gymnastics and general physical culture. The Japanese system of "Judo" should be an object-lesson to us. With an inherited bodily stature much inferior to most Aryan races and with a diet greatly restricted in variety and sustenance, they have yet built up a nation which in vitality, hardihood and endurance, is second to none in the world. By careful nurture they have more than

made up for the deficiencies of nature. Yet as already pointed out, they are largely non-carnivorous in food, and abstemious to a degree in their habits of life.[1]

The absence of a common language has been the bane of India through ages. Yet we have in Hindustani and its dialectic variants a language spoken by the largest group of people in the world, taking precedence even over English in this respect. Hindustani has permeated with an insidiousness truly amazing, into even the Dravidian tongues, about 50 per cent of whose current vocabulary today is of Sanskrit origin. Hindustani is so easy to learn that even Europeans find little difficulty in acquiring a creditable fluency in it, while the South Indian children take to it like duck to water. For military solidarity a common language is a *sine qua non* so that even in Switzerland, which has three languages, the army jargon is German. In our country the spread of Hindustani should be accelerated.

[1] The Youth Movement in Germany, the largest in the world, also deserves serious attention. It consists of over 7 million boys and girls, or over 90% of the people between the ages of 10 and 18. The Hitler Youth are divided into four groups, two for boys and two for girls. They are all given uniforms and organised in sections and districts. Every Wednesday and Saturday afternoon the whole of the Hitler Youth meet, for routine drills, hikes and rallies. There are periodical tests in physical fitness, grenade-throwing, community singing and marching. The upper group (age 14 to 18) is a thinly veiled military organisation, the boys wearing daggers and donning uniforms closely modelled on that of the army. The boys and girls learn shooting, marching in troops and elementary tactics. The girls are taught folk-dancing and household duties in addition. The Nazi philosophy is, of course, invariably taught to the young ones, to the exclusion of all other ideas. Most important of all the compulsory organisations is the Labour Service Corps, in which all young men and women are bound to do service for the fatherland, for a specified time. If only, in India, we could adopt (and adapt) a similar organisation, our military power-potential will be multiplied a hundredfold!

The instructional language of the Indian Army is already Hindustani, which shows that our rulers are fully alive to the importance of a common official tongue for the sepoy.

With the wide diffusion of a common tongue should proceed the education of our promising young men in various languages of the world with the ultimate view of forming our own diplomatic corps, consular service and intelligence staff. Three or four colleges of military science should be established at prominent centres of learning to round off the army education of the cadets, who would be taught military geography and history, strategy and tactics, advanced ballistics, and the chemistry of modern warfare, and also initiated into the profound mysteries of secret codes, cryptography and counter-espionage.

Before concluding this chapter it may be appropriate to say a word about the doubts which have been cast on our national solidarity, because of the strong communal bias shown by a considerable section of the Mussalmans in India. It must be frankly admitted that many of the latter are keeping out of the national movement, largely out of pride, pique and perversity, and loudly ventilating their grievances (often largely imaginary) and otherwise "cashing in" on their nuisance value. The Mussalmans feel that as a community who ruled over the major part of India in the past, they should count for more in local politics than their numbers warrant. They are also upset by a feeling of neglect and of cold-shouldering, incidental to the concentration of political power in the nationalist High Command. The moderate-minded Mussalmans have disappeared from the political arena, some by appointment, but mostly by disappointment. But it would be a mistake

to think that the Mussalman minority problem will be a perpetual menace to our national safety. Religious fanatics, whatever the shape and style of their insignia, will lose their following in the same ratio as religion ceases to count for much in politics. This is evident when we look at our younger generation amongst whom the bitter seeds of religious bigotry have not taken much root. The intellectual youth of Islam is on the whole strongly patriotic and liberal-minded. Ninetynine out of a hundred of our Islamic brethren are sons of the soil, many comparatively recent converts from Hinduism, and most with a large heritage of ancient Indian culture, tradition, and even personal law. They are not as a rule, likely to harbour un-Indian or extra-territorial sympathies, despite the vapourings of a few disgruntled bigots. The "Pakistan" idea strikes one as being the hectic offspring of a fevered imagination. Even the Anglo-Indian press has pilloried the plan to dismember India for the special benefit of the marauding hordes from across our northern and western borders. Recent history has shown that the ideas of nationality and self-determination are transcending the barriers of religion and sociology. Except where ethnic differences are pronounced, theological distinctions do not breed discord as they seemed to do many years ago. There are large numbers of Mussalmans in Mongolia, and Eastern China; yet they are presumably as patriotic as the Chinese Buddhists. Similarly in Europe, the Mussalman population in Hungary, Bulgaria, and Rumania, is a larger percentage of the whole, than is the case in India; yet it has nowhere been suggested that they are anything but intensely loyal to their States. The internal division between Catholic and Protestant, the orthodox and the heretic, the Jew and the

Gentile, has not militated in other countries against a united front being presented to the outside world.

In India too the Mussalmans will soon be inside the national organisation, like the Christians, the Parsees, the Harijans, and the non-Brahmins of the Deccan. Already the Congress is in power in eight provinces, and in one or two others it is now in a key position. Of the two remaining provinces, the Punjab alone will probably continue for some time to be governed under non-Congress auspices. There is already a trend everywhere towards a nationalistic orientation even in Mussalman circles. The Shias, the Momins, and the Ahrars, are all strongly national-minded. The Jamait-ul-ulema, the premier non-secular organisation of the Mussalmans, has given its *imprimatur* to the Congress mass contact programme. In Madras, 80 per cent of the Congress Mussalman candidates in the recent District Board elections defeated their rivals. The same is bound to happen in other parts of India as soon as the acerbities of political temper are removed by a realistic understanding between the two great communities. The "religious" riots, which now occasionally disfigure our political landscape, are a sort of rear-guard action of retreating communalism, and they, in no way, constitute a serious handicap to our internal or external security. With the spread of education and an extension of the franchise, the idea of nationalism is bound to permeate among the un-lettered masses of Islam, as it has done, to some extent, among their Hindu fellow-men. A little generosity on the part of the majority, coupled with a spirit of co-operation on the part of the minority, will make the two great communities bury for ever the hatchet, which was repeatedly dug up for them by interested parties.

The presence of a strong military organisation capable of maintaining internal order will always be a force to subjugate the rowdy elements in either community and enforce an implicit allegiance to the State. Moreover, the future policy of a nationalistic Government should be, on the one hand, to emphasise the essential unity of the *economic* interests, both of the Muslim and the Hindu masses, and on the other, to eliminate those persons and, as a matter of ultimate programme, to suppress those organisations, which are trading on the bigotry of the two communities for their own aggrandisement. With the growth of our country in international stature, internal allegiance is bound to increase, as the evidence of recent history conclusively proves. When Russia and Germany were politically weak and economically backward, civil dissensions were prominent. But when the State became powerful both internally and externally, all criticism and discord were stilled. The same will happen in India, as soon as the " substance of independence " is attained by us and as soon as our national status is recognised all over the world.

CHAPTER XI

THE FINANCING OF DEFENCE

NAPOLEON used to say that an army marched on its stomach. It can be truthfully claimed now that the successful war-machine pivots round a well-oiled exchequer. Without sufficient finances, the machine will misfire and stall with disastrous consequences. It has been the burden of many a political song of our leaders, that the Government of India are spending too much of their resources on the army. Our Fourth Estate has also been generally critical of the military budget. But the time has come when a dispassionate assessment of our Defence heads and their financial implications should be made. A welcome change has been noticed in the very recent utterances of top-notch Congressmen who appear to be conscious of the ever-shifting panorama of the international landscape, where old ties and friendships have been cast aside and new enmities, factions and endless conflicts have arisen, to the detriment of world peace.

India's defences today are pitifully inadequate judging by the norm set up by aggressive European and Asiatic countries. Our military strength is in an inverse ratio to our desirability, as a prize of conquest, to the 'have-nots' among the great nations. The conclusion, therefore, that our military expenditure should be increased rather than decreased, is irresistible.[1] In the foregoing chapters it has

[1] Some time ago, I used to hold the popular view that our Defence expenditure is unduly heavy. In the perspective of the changing technique of War and comparative military strength, this view now seems out-of-date. I think, however, that the correct criticism of the present expenditure is that it is uneconomic and

been indicated how much lee-way our country has to make if she is to march abreast with even the third-rate powers of the world. Even comparatively small countries like Poland, Czechoslovakia, Turkey, and Persia are much better organised in their defence than India, if we are to eliminate from consideration our foreign garrison. Even Switzerland, a country eternally wedded to peace, and which has not seen a war for some centuries, is arming herself. All this is done by whilom pacific nations not in a spirit of provocative militarism, but in an earnest attempt at self-defence.

What India wants today is *Planned Defence*, on the lines of defensive militarism, a schematic attack on our national enfeeblement, which will aim at producing the maximum amount of military efficiency with the minimum expenditure of time and wealth. A Five-Year Plan appears to be urgently indicated, each year being allotted its quantum of development with a view to rounding off the design with a full measure of achievement, at the end of the quinquennium. The yearly expenditure may well amount to an additional Rs. 60 crores so that, at the end of the five years, we would have spent Rs. 300 crores or thereabouts. It may be worth noting that England today is spending over £400 millions on her defences, or about a tenth of her national income. France is expending as much as 85 milliard francs or a fourth of her national income. The German figure is taken to be about £800 millions or nearly 15 per cent of the national earning. For India to spend a hundred crores out of an estimated earning capacity of

wasteful from the standpoint of defence value owing to the preponderance of the British element, which is admittedly more costly than the Indian element.

about 2000 crores, will not apparently be an excessive strain.[2]

The financing of this expenditure is not such a stupendous task as may appear at first sight. We have withstood more severe strains on our finances in the past and still continue to do so despite most untoward circumstances. After handsomely sharing in the cost of the "War to end War," we made a free gift of 150 crores to rich Britain as our contribution to her economic rehabilitation and as the purchase price of the nebulous Mont-Ford reforms. In the early 'twenties of this century we lost over 50 crores of rupees over the unwise sale of Reverse Councils, when the rupee was soaring in value and Reverse Councils were anything but necessary. The annual "drain" from our country, thanks to our political subjection, is conservatively estimated by Indian economists at over fifty crores. In the award of contracts, in the purchase of stores, in the selection of appointees, in commercial agreements with foreign countries, in domestic freight rates, in shipping preferments, in official direction and in unofficial policy, Indian interests have always been generally subordinated to those of the ruling clan. No wonder that even a moderate politician like Dadabhai Naoroji protested long ago in trenchant terms against thus "bleeding India white."[3]

[2] In the League of Nations' Report on Armaments, published recently, it was stated that the nations of the world spent during 1937, the enormous sum of £2400 millions on armaments. The Report estimates the expenditure for 1938 to be over £3000 millions. The 1940 figure is likely to be well over the 4000-million mark. It may be mentioned that President Roosevelt recently announced a 1500 million dollar re-armament programme for 1939-40, thus increasing U. S. defence expenditure by nearly 100%.

[3] The recent dissipation of our capital wealth (gold and sterling balances) for the maintenance of the 18d. ratio has been discussed later.

The Five-Year Plan of Defence will prove a great blessing to India both directly and indirectly. In the first place, it will enable us to stand on our own legs and assert our right to independence in the present-day aggressive and imperialistic world. That Mahatma Gandhi too does not rule out the method of violence to maintain national integrity may be seen from his desperate remark to the Chinese delegation that "either complete non-violence or complete violence" would enable China to withstand the attack on her liberty. I do not know what precisely he means by "complete" violence, but I believe it is fairly within the capacity of India to build up in a short time a workable national defence mechanism, which would be sufficient to meet an emergency in which India, as a part of the British Empire, would be involved. As said already, luckily for us, our war-apparatus will have to be called into action *only in the event of an international war* and the technical responsibilities of defence in such a situation, when attacking enemies are engaged elsewhere also, are naturally less serious than they would be if India were called upon to give single-handed resistance to a powerful enemy. Secondly, the stress of war will give a much-needed impetus to our industrial system as a whole and its re-organisation will be a permanent blessing to the Indian economy. It might be feared that the adaptation of the Indian economy to war economics would stand in the way of the development of our peace-time industrial requirements. This, however, is not so. We have enough material, both human as well as natural, to spare for our peace-time national development, even after the maximum needs of an efficient, self-reliant war economy are satisfied. In the not very distant future, India must have adequate

Afghanistan, Persia and Egypt appear to have got ahead of us in the matter of aerial preparations.[3] We, on the contrary, unmindful of the growing menace to our lives and homes and of the swelling volume of international bellicosity, are living in a fool's paradise. In India we have several minor advantages as compared with Britain in regard to aerial defence. We are farther away from the storm centres and we are essentially a village community. Our political existence, moreover, is not so bound up with big cities, as England's is with London, for example. Our population is inured to hard life, open-air conditions as also to intense suffering by famines and floods. The joint family system and the availability of a village shelter for most town-dwellers (even though it be for a short while) is another factor in our favour. But the danger from air attack cannot be minimised. The horrors of the high explosive, incendiary and gas bombs are too real to be lightly ignored. Even the few cities on our western coast may suffer such serious casualties that a panic might easily spread all over the land, as we lack the mass discipline so essential for organised defences and so prominently in evidence in western countries like Germany and France. The air raids might induce a spirit of despair and defeatism and paralyse the domestic defences on the social front. The only way in which it may be feasible to neutralise, partially at any rate, the effects of such air attacks, is to scientifically organise the air-raid precautions, and to meet the enemy

[3] Recently it was announced that Afghanistan was buying a large number of aeroplanes from Russia and Germany. It may be mentioned that even a small country like Siam has a larger indigenous air-force than we have, while Egypt is planning for an air-force of no less than 500 planes!

in the air on terms which will seriously hamper his operations.

The demands of our air defence are, thus, so peremptory that they do not brook any delay. A first-line force of 1,000 machines should be visualised as the immediate requirement, with 200 squadrons of 2,500 units as the ultimate pre-mobilisation standard. Of the equipment roughly half should be pursuit and combat planes of the most up-to-date type, rapid in flight, quick in manoeuvre and devastating in fire effect. The rest of the air arm should be bombers, transport and observation planes. India is lucky in that she can draw gratuitously from the dearly accumulated international store-house of aeronautical progress and avail herself of the latest devices, instead of wasting her finances on obsolete models. Of all the nations in the world, the people with the finest aircraft on the skies are the Americans. Even advanced countries like France and England are not ashamed of taking out licences for internal production of American designs. India can do no better than take a leaf from the books of these countries and copy their most popular models. Most famous among these are the American Lockheeds, the Boeings, and the Seversky pursuit planes, and the German Dorniers and Messer-Schmidts. The German fighters are said to reach a speed of nearly 400 miles an hour with a range of 1,000 miles and a fire-effect of 4,000 rounds per minute. The Boeing bombers are wondrous monsters of the air, weighing 16 tons each and able to fly 300 miles per hour, even when fully loaded with scores of 2,000-lb bombs. In the realm of troop transport, the Douglas machines apparently take the palm. The Germans now lead the world in the quantity of their aerial equipment. As regards its quality very little

information is allowed to leak out; but it is so efficiently organised and that too within such a short time (about 4 or 5 years) that to a nation which would arm at a breakneck speed, Germany's example is as a beacon-light.

The connection between aeroplanes and the automobile industry is very close. Except to some extent in America, it can be said that in all the leading countries of the world, aero-engines are manufactured in motor-car factories.[4] Alas for India, we do not yet possess an automobile industry, with the result that we import annually over 10 crores worth of motor cars and accessories. Automobile production, in this mechanical age, is the hall-mark of industrial modernism; its lateral ramifications are immense, and its technical impulses far-reaching. The motor car is to military aviation what the bicycle is to the small-arms business. In both cases, the transport industry plays the part of a foster-parent to the defence service. It is needless to emphasise the urgency of making our country self-contained as regards road transport, even in the same measure as in rail transport. Some rather juvenile and ill-equipped efforts to produce motor cars in the country have been ridiculed into a collapse by powerful alien interests. Here again State patronage is of supreme importance. It is, therefore, a happy augury that the Congress has taken up, among other things, the question of an automobile industry in India, at the instance of Sir M. Visvesvaraya, the ex-Diwan of Mysore and a member of the National

[4] In this connection, it may be mentioned that leading automobile firms all over the world, like Fiat, Renault, Mercedes-Benz and Skoda are all principal makers of aero-engines. In England, as mentioned elsewhere, the Shadow Factory Scheme is run entirely by motor-car firms.

Planning Committee. When one remembers that Ford started life as a repair shopkeeper and Lord Nuffield as a cycle mechanic, we need not despair of putting India on the automobile map of the world. A few years ago, who could have thought of motor tyres being made in India? Yet today there are three efficient tyre factories in the field although two of them are of foreign ownership. Our people have usually been pictured by foreign critics (who were not often disinterested) as dreamers, mystics and lotus-eaters steeped in an enervating mixture of fatalism and *insouciance*. Yet today, we have, in the production of sugar, cement, cotton textiles, iron and steel, and paper, made such great strides that a new faith has dawned on the Indian business world. The lessons of modern Japan, socialist Russia, and democratic Czecho-slovakia are full of encouragement to us. Czecho-slovakia, in particular, when it was under Austrian hegemony, was backward and poverty-stricken; but within a few years, thanks to assistance from France, it became one of the most progressive industrial nations of the world. The great Skoda works in Bohemia, which had affiliations with the French firm of Schneider-Creusot, now make not only excellent automobiles but tanks, artillery, munitions and aircraft.[5] The Japanese have similarly started making their own pleasure cars (the Datsun) and Diesel trucks and charcoal burning buses in factories, which also turn out much mechanised equipment for the war office.

[5] Recent reports indicate that the Czechs have emancipated themselves from French control. The French manager of the Skoda works has been dismissed and there is talk of Krupps taking over the management of the works. It may be remembered that the French military advisor to the Bohemian army was recently asked to leave the country.

No time should be lost in establishing three or four large-scale motor-car factories of the most up-to-date type, in selected parts of the country where iron is abundant and where cheap mechanical power (white or black coal) is available. The State of Mysore is an ideal location as the Bhadravati Iron Works are close by and hydro-electric power can be tapped. The Bihar iron mines and the vicinity of Jamshedpur suggest another siting for the industry, while the west coast of Bombay will also be suitable, because of cheap power, provided iron ore is found near the region in adequate quantities. To some extent, the enterprise is handicapped by large gaps in the geological survey of the country. There are probably large deposits of ferrous material in various parts of the country which have not been located by official survey, as was recently shown by the accidental discovery of big seams of iron in the States of Mandi and Bastar and more recently in Sind. Hand in hand with industrial development should proceed the acceleration of geological and mineralogical surveys in selected areas. Power development again is a *sine qua non* of successful industrialisation, as any tyro can tell us. So far as the automobile industry and the munitions industry are concerned, their significance has been so amply demonstrated everywhere, that the necessity for speed needs no emphasis.

The auto-car factories need only be medium-sized plants, as it has been proved by Japanese experience that efficient production is possible with a turnover of only about 5 to 10 thousand cars a year. The ruling prices in India are all too high for the capacity of the people and hence the private automobile has been essentially a rich man's toy. In a recent statement by Sir M. Visvesvaraya, it was

clearly shown that the actual cost of production of the auto-car plays a comparatively small part in the final buyer's price, which is unnecessarily inflated by transport charges, agent's commissions, import duties etc. With a decrease in cost and improvement in the technique of production, the vehicle must become accessible to the middle classes and large numbers are bound to be in demand in the future in this country. The business conveyance, the bus and the truck must all be produced in India, since in this country of long distances, at present large quantities of them are being imported at ridiculously high prices from abroad, and enormous profits are being made by both manufacturers and middlemen. In Germany and in Japan Diesel-operated trucks are now in mass production. The latter country, in view of its lack of petrol resources, is also utilising charcoal gas for driving its town buses. In our own country, oil resources are not plentiful and the present petrol-powered road services are so uneconomical (*vis-à-vis* the railways), that they are enjoying only a hand-to-mouth existence. Charcoal, on the contrary, is cheap and universally available and should be provided for all normal commercial road requirements, especially where high speed and great efficiency are not required.

The automobile factories whose genesis has been sketched above somewhat elaborately will manufacture all the aero-engines needed for both commercial and military aviation. Manufacturing rights of up-to-date types of heavier-than-air machines will have to be borrowed from America and England and production started with the least possible delay. The over-all cost should be lower here than in western countries, in view of the comparative cheapness of labour and raw materials. Large-scale production also

will be a cheapening factor, as mass production radically cuts costs. For example, the English Sunderland boats cost £50,000 and upwards, but the American Lockheed Electras cost only £15,000 each, though the latter are superior in power and performance to the former. In India, if production is well organised and a long-term schedule is worked out, the cost of a bomber should not exceed £10,000 (Rs. 133,000) and that of a fighter about half that amount. If home production cannot be speeded up, reliance will have to be placed on purchases of machines from abroad. Germany and Japan are the only countries in the world whose manufacturing costs of aeroplanes are reasonably low, but unfortunately India cannot be their customer for obvious reasons. American prices are often absurdly inflated by profiteers, while most of the European producers are busy with their own requirement schedules. India is thus largely thrown upon her own resources, which have yet to be marshalled and effectively organised. This is a task for the future. A first step would be to compel all first-class internal mail to be carried by air. We are already spending about Rs. 20 lakhs in subsidising aerial transport companies which are mainly owned by non-Indians.[6] Our meteorological organisation, whose service is gratuitously available to the alien navigators at the cost of the Indian taxpayer, is excellent. The ground organisation is good as

[6] While the Indian National Airways and Tata's Air Services are mainly Indian in ownership and personnel, the Indian Trans-continental Airways is owned to the extent of 51% by the Imperial Airways, the balance of the capital being contributed equally by the Indian National Airways and the Government of India. There is a proposal to increase the capital of the I.T.C.A. from 7 lakhs to 32 lakhs, consequent on the "all-up" air mail scheme. It is urgently necessary that this Company should get into Indian hands.

far as it goes, though it is scarcely comparable to the well-equipped aerodromes of England, America or Germany, where directional flying by wireless is almost universally catered for.

Civil aviation is an indispensable adjunct of an air defence programme. About a hundred flying clubs with well-laid-out landing-grounds and hangars should be scattered about the country. In British India there are about two hundred district towns and in State India about a hundred more. One hundred of these should be selected as the headquarters of aero clubs and supplied by the Government with two machines apiece, one a small plane suitable for ordinary amateur flying and the other an up-to-date one for advanced instruction and parachute practice. A system of ingeniously designed subsidies (which will achieve maximum results with minimum cost) is indicated as a stimulus to air-mindedness which seems to have become extinct since the days of the Ramayanic wars, when our poets sang of *vimanas* which swooped down from the air carrying destruction to the demon enemy or glided over the clouds with their divine load, making earthly contacts at propitious moments. The flying clubs are the recruiting grounds for the air force in times of national peril and every encouragement should be given to amateur flying. Every advanced country today has qualified fliers in tens of thousands, but in India we have a few scores only (550, to be exact), many of whom are, moreover, elderly and unsuited for military aviation. The airmen must of necessity be young and unencumbered persons, full of hope, daring and scorn of death. The late war produced such men, who have won undying fame for themselves. One has only to recall the names of Richthofen (of the renowned

Circus), Boelcke (who won sixty victories before he was killed in an accident), De Havilland, Balbo (the veteran Italian), Nugennesser (the French ace) and Major Bishop of Canada, to realise how much the development of this new weapon called out the best and the noblest among the fighting spirits of the nations. For 1,000 first-line machines, we will require 3,000 air-force pilots. To train up this number initially, two or three aeronautical colleges should be set up at convenient centres, the personnel for training being selected from among the promising amateur fliers of eligible age, physique, education and record.

Every glider is an airman in embryo and this is realised nowhere else more than in Germany where currently there are 50,000 regular gliders. In India every district town should have a gliding club, with its own equipment of ground machines and instructors, provided at the expense of the State and located at suitable elevated sites. Three hundred such clubs can harness much local enthusiasm among the people and train up within a year or two several thousand experts in the art of gliding. Honourable mention may be made here of the efforts of Pandit K. K. Malaviya of U. P. in agitating for both gliding and aerial training. Unless, however, Governments in India take up this question of aeronautical training both for commercial and (ultimately) defence purposes, no substantial results will be achieved. The stocking of the flying and gliding clubs will not cost the Governments more than Rs. 2 crores to begin with, with a proportionate recurring expenditure on subsidies to pilots and gliders. That our young men (especially the educated ones) will make capable fliers from a military standpoint cannot be seriously doubted; it is entirely a question of training. What is lacking is

organisation, opportunity and, lastly, a realisation of the urgency of defence. India must now have leaders with vision, faith and determination; men who can plan with imagination and execute with daring. Subtle politicians and casuistic philosophers, who can debate nice points of laws and constitutions or can play upon the sentiment of the masses by making the time-honoured appeal of outworn creeds, have no place in the immediate pageant of coming events. For, what is required is action rather than words, execution rather than theorising, and fervour rather than mere sentiment.

India at present possesses no munitions industry. It is not because gun-powder was unknown to the ancients. We find detailed instructions regarding a muzzle-loading gun, called *nalikastra* in the *Sukraniti* (*circa* 300 A.D.). The Chinese used gun-powder long before the birth of Christ, but only for pyrotechnic display, not for warfare. The perfection of explosives as a weapon for the destruction of life is *par excellence* a European achievement and Europe's current hegemony in world's affairs is due, to no small extent, to the clever and ruthless exploitation of this achievement. The manufacture of munitions goes hand in hand with the development of heavy chemical industries, especially nitrogenous and sulphurous products. If India were to become self-sufficient as regards her ammunition supplies, she must develop apace her chemical industries. At present, there is practically no important Indian company concentrating on this vital line of business. A foreign concern (Imperial Chemicals) has obtained, through the shape of a lucrative monopoly, a vice-like grip on the domestic market. The tentacles of this alien octopus should be relaxed by legislation or by agreement and State

encouragement afforded to indigenous manufacture of essential chemicals. The country's natural resources should be put in entire commission and efficient plants also set up for the fixation of atmospheric nitrogen, as has been done in most advanced countries. Recent advances in the manufacturing of explosives have been remarkable and it is obviously a matter of life and death for India to keep abreast of this progress.[7] Glycerine is an important element of munitions. This stuff is a by-product of the soap industry. Till recently lakhs of rupees of unsaponified refuse were thrown away by the soap-makers. The Tata plant at Cochin now makes a few hundred tons in a year but export the material to Germany under a long-term contract for lack of a domestic market!

The horrors of chemical warfare are still largely unrealised. Of the poison gases actually used in the last War, the world is somewhat familiar. Chlorine compounds (phosgene, chloropicrin and so forth) were the earliest to be used. These attacked the lung tissue and the poor victim retched, coughed and suffocated. He died amidst his expectorations with a blue and bloated visage and a bloody froth in his mouth. The yellow cross or mustard gas, which followed, was more insidious, more cruel and more murderous. It was not really a gas but a volatile liquid, which killed slowly but surely every animate thing which came into contact with it; it burnt, blistered and rotted away all living tissue. Its maximum effect was a cruel torture

[7] The Moscow Radio Station recently broadcast information about a new type of explosive bomb, manufactured in Germany and used in a raid on Barcelona on the New Year's eve. The splinters from this bomb travelled a distance of 160 feet and killed even men who had fallen flat on the ground and covered themselves up.

and agonising death, its minimum result was a prolonged misery and abbreviated life. The scientists are now talking of other poisons which would destroy the nerves and unhinge the brain, which would send whole cities and armies permanently to the land of Nod. To Professor Lewis of America goes the doubtful credit of having discovered a new arsenical solution (Lewisite or the Dew of Death), one part of which in ten million times of air is sufficient to render men *hors de combat.* Other chemical weapons for mass murder are being forged in all war office laboratories. Dupont de Nemours have put on the market a new kind of TNT which while about four times as potent as the war-time product, is so safe that it does not explode even when knocked about with a sledge-hammer. The Germans are credited with the discovery of a mystery ray which will carry invisible death to distant objectives. Every war office laboratory is humming with the noise of sizzling test-tubes containing millions of virulent disease germs to be let loose on the enemy population in war. To Indians the use of the hideous devices of chemical warfare may appear heartless. But our defences at least should be above reproach. Millions of gas-masks should be prepared and stored about our western cities. It is a minor blessing that the vast majority of our peoples belong to the country, and the crowded city population is comparatively small; but this city population requires protection and at least 50 million gas-masks should be prepared and distributed free to the poor and at cost to the well-to-do. The current price of a fairly serviceable mask is estimated at 10 shillings.

That our workmen are quite equal to the task of manufacturing good quality ammunition was proved during the war when the large factory near Calcutta made by the

million the famous Dum-Dum bullets. Large factories should be immediately set up for turning out munitions of all kinds. Unluckily, there is no local supply of mercury which is so essential for making detonators and fuse caps. The world's supply of this precious metal is confined practically to Italy, Spain and, to a smaller extent, the U.S.A. India will have to obtain large supplies of mercury-fulminate and store them up for future needs. We are more favoured by the gods as regards "murderous manganese" which is found in servicable deposits only in India, Brazil and the Gold Coast. In the form of an oxide it is used to strengthen and temper steel used in shells, bullets, rifle barrels and other high pressure contrivances of death. Our local supply found in Bihar, North Madras, Central Provinces and some Indian States is in the hands mostly of foreign companies who have not scrupled to obtain concessions for the proverbial song and to exploit them through specially laid railways subsidised handsomely by the taxpayer. Sir T. Holland pointed out, as early as 1905, how the export of manganese was a great economic loss to the country, which could greatly benefit itself by using the ore in a large-scale steel and chemical industry. Although 33 years have gone by, no part of the ore is used in India except a little by the Tatas.[8] It is essential that the control of this vital war-stuff should be vested in the State which should conservatively exploit it, with an eye on the distant future. Another primary war metal is nickel, of which we possess practically no supplies. Canada produces 87·1 of the world's output of this metal which is used for multifarious purposes in the armament industry.

[8] Out of over one million tons of manganese ore produced in our country, only 60,000 tons are used by our steel industry.

It is needless to say that liberal stores of this metal also should be laid up.

Copper and aluminium complete the tale of essential war metals. The former is produced in moderate quantities (some 6000 short tons) inside our borders by a company with foreign affiliations, but it is highly probable that further deposits may be located by an efficient survey especially in Sikkim and the Nellore District of Madras. Utmost despatch is necessary in augmenting our domestic resources which are insufficient to meet even our peace-time needs, which are the heaviest per capita, in the world. It is well to remember that war-time pressure in Germany became so acute in 1916-17 that the war-lords were forced even to pull up electric cables, melt statues and break up domestic utensils. It is believed that the 1918 collapse of the Central powers was in a large measure due to a copper famine. In India, it is a pity that the irresistible propensity of commercial foreigners to grab iniquitous privileges, euphemistically called "Concessions" has scared those of our ruling princes, whose political attitude is not perennially horizontal, into clamping down a tight prohibition on mineralogical investigations into their territories. These princes are content, like the the affluent in the Pindari days, to leave their wealth buried in the bosom of mother earth, hoping for more propitious days to dawn.

Aluminium which is so useful in the aeronautical industry, is fortunately as widely distributed as clay, from which it is extracted by electrolysis. Our production was somewhat negligible, owing to lack of cheap electric power, but the recent development of hydro-electric schemes has given a fillip to this infant industry. It seems imperative that efficient state-assisted factories should be established

and production on a large scale accelerated. All demands of our aeroplane factories and the peace-time trade should be met in the near future from domestic supplies of bauxite.

A sad commentary on our national helplessness and lack of enterprise is the fact that the lion's share of our commercialised mineral wealth is slowly but steadily being drained out of the country. Gold mining is still almost a European monopoly. Foreign companies also hold a large interest in the iron mines. As already mentioned, copper, manganese, tungsten and magnesite are largely under foreign exploitation. A definite halt should be placed on these inroads on our industrial self-sufficiency. The key metals should be controlled directly by the State, the proprietors being compensated on the now well-accepted principle of "Cost-less-depreciation" (and not on the basis of capitalised profits).[9] An embargo should be placed on further mining concessions to foreigners and a system of royalties devised, by which excessive profits would be pruned down to the benefit of the public exchequer. At present the mining dues paid by some of the companies are scandalously low, especially in British India. For digging out and exporting manganese ore, for example, the British "Indian" firms pay about 0-1-6 to 0-2-6 per ton, while in the Indian States the average royalty paid is two or three times this figure. Legislation should be enacted to prevent mining shares being transferred to non-Indians in future, in those cases where private control is permitted. This inhibition is essential to the vital interests of the country.

[9] This was the principle adopted by the Mexican Government when it expropriated the alien oil companies who had practically monopolised Mexican oil production.

Our anti-aircraft arm is like snakes in Iceland, "*non est.*" It is clear as daylight that without efficient anti-aeroplane guns many of our strategic points will be highly vulnerable from the air. It has been mentioned how military objectives like important railway junctions, locomotive sheds, bridges, and essential public utilities are so defenceless that even an attenuated enemy attack can inflict serious havoc on them. The only ways in which our cities can escape complete extinction are those provided by efficient anti-aircraft measures. Cities like Bombay, Karachi and Calcutta are especially vulnerable. Bombay island, for example, can be severed from the mainland in a few minutes after which its million inhabitants will be at the mercy of the enemy bombers and landing parties, unless efficient A.R.P. arrangements exist locally. Similarly, if Calcutta is cut off from the rest of India by the destruction of the Hooghly bridge, its fate will indeed be a terrible one, if no anti-aircraft defences are arranged nearby with unlimited supplies of chemicals, ammunition and food-stuffs.

Powerful anti-aircraft weapons of the latest pattern must be installed at all these vital points and local volunteers trained in their use. The big cities, especially on the West coast, must have regular squads of air-wardens equipped with an efficient and adequate supply of decontaminating and fire-fighting apparatus and ambulance facilities. The English 3·7″ gun is supposed to be effective up to 18,000 feet and several hundreds of them must be installed at necessary locations, especially around the local fortifications, water works, electric generating stations, and hospitals. Big cities like Bombay and Karachi, whose means of communications are restricted in number and variety must have many batteries available at an instant's

close consonance with the size, ability and requirements of the various units of the Federation.

There is needless extravagance at every turn of the administrative machinery. Take the United Provinces, for example. With a population approximately equal to that of Madras and with revenues about two crores less, this province has 48 districts as compared to 27 in Madras. The result is that the I.C.S. cadre in the northern province consists of 200 officers as against 160 in Madras. Even Bengal, which in population, income, and size, substantially exceeds the Twin Provinces, has only 30 districts. No wonder then that the United Provinces has been a rich, ever-green pasturage for the members of the 'heaven-born' services to browse contentedly over. The difference in pay between junior and senior appointments in all other Services is Rs. 100 at the outside. In the Indian Civil Service it is nearly Rs. 500 and one wonders whether this colossal extra remuneration is necessary for the increased work. The deplorable tendency to multiply top-grade jobs has other repurcussions. For every bureaucrat who is brought into being, there is the inevitable bureau of clerks, superintendents, peons, messengers and *daffadars*, serenely basking in the reflected glory of the *burra-sahib* and adding to the tale of public expenditure without commensurate results. The number of officers who draw "special pay" is legion. In fact, whoever misses the easy comforts of a district life imagines that he ought to be compensated by a 'special pay.' The incubus of the Indian Civil Service is something which is inescapable. It has been aptly said that the majority of this gilded galaxy are neither Indian, nor civil, nor servants. We have heard Prime Ministers proclaiming that they are only the servants of the people;

we are yet to hear a Civilian aver that he is but the servitor of the taxpayer. The I.C.S.-wallah is a sort of greatest common factor in official life. Short of being the Chief Engineer or the Surgeon-General, it would appear that he can preside over any department of Government. Even the late ministers could not overcome the hypnosis of the three magic letters; like a doe caught by a boa-constrictor they merely gazed in stupefied helplessness at their erst-while masters. For every special job, every new preferment, the Government needs must select a heaven-born, forgetful of the fact that this was so much encouragement to the perpetuation of the costliest officialdom in the world. It must be recognised, however, that with the advent of popular ministries, for the first time in British Indian history, a radical alteration in the standpoint of the administration is visible. Hitherto the usual formula with the powers-that-be, as regards the fixation of salaries for high officials, was how much could be given without creating popular discontent and without straining the resources of the taxpayer. The only check on excessive liberality on the part of Provincial Governments was the Secretary of State who could (and often did) interfere with the extravagant proposals of his pro-consuls. Now the rôles are reversed. It is the popular ministers who are eager for economy, and it is the Secretary of State who is standing in the way of a speedy disburdening of the public exchequer.

There is much avoidable wastage in certain departments of Government, especially that in charge of public works which is creating a new aristocracy of contractors and engineers, many of whom are victims of the get-rich-quick mania and with whom a scrupulous regard of the taxpayers' interests is not a conspicuous failing. The unsavoury

scandals attendant on the award of contracts and the execution of works are too well known to require detailed description. The investigation into the Back-Bay fiasco at Bombay threw a vivid light on the unwholesome practices which can make their insidious way into a big public project when the search-light of public criticism is dimmed. The attitude of most Governments has been hitherto one of cynical *laissez faire,* even if more serious allegations are wholly discounted. We are too near the events and actors in this evil drama of greed and graft, to be able to view them in their true perspective and to apportion blame and responsibility in a proper measure. But it is essential that improvements in executive control and in public audit should be made with a view to curb effectively the tendency of those in power to canvass the interests of their favourites at the cost of public exchequer, either through extravagances in prices of work or in the quantitative statement of the latter. The administrative stature of Government audit has to be increased, and its attitude altered from perpetual supineness into one of active vigilance.

A word about our investments, both Central and Provincial. The first among these are the national Railways which total nearly 45,000 miles, and constitute the third biggest chain of rail-roads in the world. Rs. 880 crores of public money are invested in them, but their real value must be many crores more, owing to the appreciation of numerous assets (like stations and buildings) and to the non-inclusion of the price of the land, which in most cases had been gifted free. The part played by our railway in internal economic development is indicated elsewhere. Their financial importance is obvious. They account for nearly 80 per cent of our public debt and the annual interest bill amounts to

over 31 crores. It is clear that the successful management of this huge asset is a problem of crucial importance to the State. At present the railway financial horizon is anything but cloudless. For several years, the Railways have been unable to pay their way and have had to draw upon the depreciation reserves to the extent of nearly 40 crores. Instead of being a profit to the investor, the railways have become a source of much worry and considerable loss to him. The main trouble here as elsewhere is that the management is costly, unnational and wasteful. The heavy influx of European personnel is not conducive to either economy or a patriotic bias.[11] There are several railways owned by Indian States and private Companies which are entirely managed by Indians. This makes it difficult to understand the insistence of the Central Government on perpetuating the foreign element in the top rungs of the Railway ladder. The secret probably lies in the natural desire to conserve the large patronage available on a 1000-crore investment. The railways are large consumers of English goods the market for which will suffer grievously if Indians are allowed access to key positions in the organisation. Most of all, it has been alleged that the twin tracks bind India in a tight military bondage and that our war-lords are extremely reluctant to loosen this bond by letting in indigenous control.

In the New Deal with England the autonomy of our railway administration should be secured for India. The expenses should be slashed, uneconomical competition

[11] In some Company-managed Railways it would appear that almost 50 or 60 per cent of the superior staff come from two or three related families!

eliminated, and a prudent policy of traffic stimulation initiated. The absurd extravagances in connection with monster engines, sky-scraper stations, lavishly equipped saloons, remodelled station-yards, and various hare-brained publicity stunts, should cease. It should even be seriously examined whether the metre gauge is not after all the economic gauge and whether the Divisional Management is not an extravagant eye-wash. If these things were done, there is no reason why the railways should not only pay their way but also contribute handsomely to the common exchequer more than the 1 per cent on capital which was laid down by the 1924 convention. The foreign companies should be purchased outright at the earliest opportunity. It is estimated that if the B.N.W. and R. K. railways had been bought out in 1937 (as per the contract with the managing companies) the central budget would have benefited to the tune of nearly 90 lakhs a year, which sum would have covered the cost of education in the provinces of Sind, Orissa and N.-W.F.

The second largest national investment is in irrigation projects whose management has been handed over to the provinces along with the resultant revenues and the interest liabilities. While these works have been generally profitable there are apparently some which have been overburdened with initial expenditure. While there is no great scope for an increase in the income from the water canals, it is possible to greatly increase the acreage under cultivation by liberal subsidies to enterprising farmers and by initial concessions in water rates. Vast extents of virgin soil in Sind, the Punjab and Madras can be put under the plough if only a little financial assistance be forthcoming from Government. It need scarcely be mentioned that any

investment made in this direction will be substantially remunerative, both directly and indirectly.

The need for a systematic survey, and the economic exploitation, of our mineral resources has been mentioned elsewhere. Our forests also can be made to yield a large dividend if their resources are properly organised and utilised. At present we have a very costly forest administration with various specialists who seem to be notable only for their specially high emoluments. In the matter of contracts for the sale of forest produce also, abuses on a large scale are stated to have been noticed all over India.[12]

The study of the question of sinews of war will not be complete without a reference to new sources of taxation. With the gradual spread of prohibition the provinces will lose, it is estimated, over 10 crores of rupees between them. This loss will have to be made good by new-taxes like sales and amusement taxes. For example, there could be sales taxes on the disposal of standard articles like cycles, gramophones and their records, radio-sets, motor cars, motor cycles, certain types of electrical fittings, air-conditioning apparatuses, and imported silk goods, as also on other articles like petrol, soap, cement, glycerine, cotton manufactures, milled rice, oil, coffee and tea. Such sales and processing taxes have been in vogue in America for a considerable time and are reported to have been successful. Of course, in India conditions are slightly different owing to the dispersed nature of production and processing, and the unregulated life of the people, which makes it

[12] If our forest wealth is scientifically exploited, we should be able, for one thing to produce all the paper we require including *Kraft* paper which is imported in large quantities at present.

comparatively difficult to secure the necessary official control and check.

Taxation of agricultural income has already been a *fait accompli* in one or two provinces though it has not been carried out on scientific lines or completely. Even if the income of agriculturists be not taxed, there is no reason why the contributory agricultural income of non-agriculturists should not be assessed. A rational scheme of agricultural income-tax will go far in robbing landed property of its fatal lure for the monied classes. Death duties are also likely to be a source of considerable revenue in the future. In most advanced nations it has long been a prominent feature of public finance; and the gloomy predictions of its opponents, that it would lead to a drying-up of capital and savings, have been falsified. Capital is as plentiful today as ever before and the only thing lacking are venues for its profitable employment.[13] A favourite tax with the totalitarian states is that on the earnings of corporations which have to split a percentage of their net revenue with the state, in addition to the income-tax payable by the individual shareholders. In Germany, it is stated that fully a tenth of the national budget is financed by this tax alone. *In return for this contribution, the Governments exert themselves to obtain commercial and technical advantages to those prominent industries which are the jugular vein of the body politic.* Taxes on servants and

[13] Sir Stanley Reed, a critical and experienced observer of Indian affairs, recently wrote, in a London periodical, that there is such a good supply of capital in India that in future, the rôle of the British business man will be confined to lending merely expert, but subordinate, assistance in industrial organisation and management.

domestic animals are favoured in certain countries, while professional taxes are popular with others.

In India there is considerable scope for a levy on exports like raw jute, cotton, tea, manganese, tungsten, hides and skins, and oil seeds. The tax may be so adjusted as to serve a dual purpose, *viz.*, to strengthen the exchequer, and to retard the exodus of raw materials useful for our own industries. The taxes on necessities of life like salt and kerosene oil are cordially disliked by the poor and are unequal in their incidence. Feast and festival taxes will have a different objective, *viz.*, the penalisation of periodical extravagances (associated with birth, death and marriage) which largely neutralise the congenital thriftiness and simplicity of the *Kisan.* A heavy imposition on benefactions which do not serve the mundane needs of the populace (like temples, *maths*, and mosques) may also be suggested both as a means of diverting charity into utilitarian channels (hospitals, schools, parks, etc.), and as an insurance against the neglect of the upkeep and the maintenance of the former style of institutions, after the life-time of the donor. A national emergency may even require that the management of religious endowments should tighten their belts a little and contribute their quota towards the rehabilitation of our protective strength, which is after all a condition precedent to the safe existence of these endowments. Our moral ideals have not prevented a tax on horse-racing and there is no reason why other forms of gambling should not be taxed. State lotteries and sweepstakes as in France or Ireland are also not unthinkable here. A tobacco monopoly on the French models will be a very paying proposition. Manufacturing taxes on luxuries like silverware, jewellery, antiques, ivories, curios and *objets d'art* can also be

visualised. Surcharges on railway freights and on electric consumption have already been essayed with considerable success.[14]

This chapter cannot be closed without a reference to the subject of gold exports[15] from our country; for, in recent years, in view of the war scare, gold has assumed a new importance as a material for the "war-chest" in each country. It is well known that since the rupee, along with sterling, left its moorings and went off gold in 1931, India has exported gold to the tune of about Rs. 325 crores. This exodus of the yellow metal is in vivid contrast to the previous trend of gold movements in India. India has been the traditional "sink" of the precious metals, both gold and silver, and throughout recorded history, with a few breaks, she has been all along an importer of gold. There is no telling how much gold and silver have been imported into India during the past. From 1901 to 1931, a total quantity of gold worth about Rs. 700 crores was imported; the value of silver imported during the same years was about the same. During the 19th and earlier centuries,

[14] The elimination of the "double benefit" relief in the Indian income-tax is expected to bring in about Rs. 1½ crores to the Indian exchequer. Similarly, the removal of the exemption on leave pay, drawn abroad, and the taxation of income on the *accrual* basis are expected to yield another 50 lakhs.

[15] I have discussed the causes and consequences of the gold exports in other places, in greater detail. Reference should be made to the following: *Indian Journal of Economics*, July, 1935, and January, 1936; *Indian Finance*, Reserve Bank Supplement, April, 1935; and in my forthcoming book, *Indian Monetary Policy* (Kitabistan, Allahabad). Here we are not concerned with the causation of the gold exports and such other things, but only with the relation of our gold stocks with the present problem of India's military equipment. As such, the remarks made here should be taken as supplementary to my views elsewhere, which obviously had no war-economics in view.

India always imported the precious metals. In view of this fact, we shall not be far mistaken if we put down the total value of gold imported from the very beginning, *i.e.*, since India had trade relations with foreign countries on a substantial scale, at between Rs. 2000 and 3000 crores. The value of silver might be nearly the same as, if not more than, that of the gold imports. The Indian villagers, as well as the richer townsmen, have always considered the precious metals as a safe form of private investment. This habit of our people has, no doubt, been due to the perpetual insecurity in which India had been kept by the marauding hosts who ravaged the country prior to the British rule, as also due to the lack of opportunities for investment in fruitful commercial or industrial channels. However, this habit has caused an enormous and irreparable loss of thousands of crores worth wealth, owing to the loss of interest on the hoarded wealth, for decades and centuries. If only this enormous wealth had been mobilised long ago for industrialisation or for investment, instead of being locked up in barren hoards, our country by now would have become one of the richest in the world. However, instead of crying over spilt milk it would be better if we utilise these capital assets in a progressive and reproductive manner, through their early and comprehensive mobilisation.

I am not concerned with the merits of the gold export controversy here. I, for one, hold the view that the Indian seller of gold, whether he be a distressed seller or a commercial seller, has done well in helping himself by unloading his gold at a time when he received a nearly 60 per cent to 70 per cent higher price for it, as compared with the price at which he bought it. The distress, no doubt, has been there, but in my view it is not caused (as is commonly

supposed) by the gold exports, which are only a symptom of a deep-rooted disease, but by several other originating causes, such as the adverse monetary policy of the Government of India, the depression of 1929—34, the general backwardness in regard to industrial development and the enormous growth of population, which must be fed and clothed. The export of gold provided a safety-valve for the pent-up economic miseries of the Indian masses; its prevention would not have helped but harmed the distressed villager, by lowering the value of his capital. The real gravamen of the criticism against the Government's gold policy is that they have utilised these exports of gold not for the legitimate purpose of cancelling the capital liabilities of our country, but mainly for the purpose of meeting our current budget requirements, such as the home charges etc., *i.e.*, for maintaining the ratio. Out of a total of Rs. 325 crores, nearly Rs. 200 crores has been employed for current requirements, while the rest has been utilised in cancelling some portion of our foreign (mainly short-dated) debt and in accumulating sterling balances in London. Unfortunately, a large portion of these sterling balances is now being frittered away in the pastime of maintaining the 18d. ratio against the trend of our dwindling balance of payments.

The military importance of gold has to be borne in mind in regard to the mobilisation of our gold and silver assets in the future. Gold, especially, being the accepted standard today of international settlements, still enjoys a prestige in the world and, therefore, will be accepted by foreign countries in return for the essentials of war. A paucity of gold resources, would cause a serious collapse of the war mechanism, especially when in an international war, it becomes difficult to raise credit abroad. The world's

principal lenders must have grown wiser by their experiences during the last war and its aftermath, in view of the notorious defaults of international debts on a colossal scale even by respectable nations.[16] So long as gold enjoys its present prestige (and, in my opinion, it will enjoy that prestige at least for some time more, until, owing to the exigencies of the supply and demand, it suffers a *débâcle*), it will be prudent for us to dispose of our gold at prices higher than were available at any time before, and thus mobilise our gold assets for the purpose of strengthening our nation.

The desirability of a golden foundation for the war economy is well realised by the principal countries of the world today. It is said that the German annexation of Austria was partly due to a desire to appropriate the considerable amount of the yellow metal in the vaults of the Bank of Austria and the £5 millions deposited in the Bank of England. France, for military and other reasons, has been accumulating gold for several years and today her gold resources are supposed to be worth nearly £550 millions. The United States Government is the owner of the largest reserves of precious metals known in history. The American holdings of gold are in excess of £2500 millions, which is about 55 per cent of the world's monetary stock of gold. The English accumulations are comparatively smaller, fluctuating between £700 and £600 millions. While 78 per cent of the total monetary gold in the world is held by America, France and England, the total holdings

[16] It is very likely that in future the only large-scale loans made by one country to another will be of the nature of strategic financial accommodation, the lender being interested in the borrower for military reasons. Viewed in this light, the loan is more or less a gift or a bribe made for essentially non-economic reasons.

of Germany, Italy and Japan account for only 2 per cent. Japan is making frantic endeavours to conserve and acquire gold; while Italy has always been notoriously impecunious and her annexation of Abyssinia is considered in some quarters to be motivated by the desire to exploit the suspected gold deposits round about Lake Tsana.

The gold stock of the Government of India at present is disquietingly small. The Reserve Bank holdings amount to about Rs. 42 crores only. Judged by the standard of most foreign countries and by the requirements of the economics of war, these holdings are miserably inadequate. For political reasons, it is necessary now to mobilise our idle gold and hold it ready for the eventualities of war. Large quantities of gold are held by the Indian princes, noblemen, temple authorities and by both the rich as well as the poor classes. This gold must be acquired by law as is done in most western countries, where private holdings of gold are being severely discouraged. The method of commandeering gold, usually followed, is to lay down a maximum value above which the possession of gold is regarded as illegal. Something of the kind will have to be done in India. A maximum of Rs. 100 or Rs. 500 per head may be allowed as permissible for indulgence in the ornament habit, while the possession of gold above this amount should be prohibited. The excess of gold over the maximum should be compulsorily exchangeable for short-dated Government securities such as cash certificates or treasury bills. This will ensure confidence amongst the holders of gold and also make available to them an annual income in the form of interest. The price at which gold is bought by the Government should be fixed in such a way that the gold which is now going out should flow into the Govern-

ment "war-chest." If this commandeering leads to the accumulation of unduly large quantities of gold, it will be always feasible to unload it on the world market in small quantities. In my opinion, whatever be the immediate future of gold, the remote future of the metal is not particularly bright. It is for this reason that I feel that the mobilisation of gold at this juncture will kill two birds with one stone, *viz.*, the financing of our defence requirements without recourse to foreign borrowing, and, the unloading of our dead assets of gold while the going is good, the international price is high, and the *débâcle* of gold is still out of sight. It may be contended that compulsory expropriation of the gold-holders might lead to disaffection. But there are several answers to such a doubt: Firstly, in a time of war, when the very safety of the nation is in doubt and when both lives and property (including the gold hoardings themselves) are in jeopardy, it is a fair proposition that our capital should be mobilised for meeting the emergency. Secondly, it must be remembered that the gold at present is lying absolutely unutilised and is a dead asset, whose utilisation is a national necessity. Thirdly, the patriotic sentiment of the people can be appealed to for this great and noble task of national regeneration. In other countries, similar calls have been made and the results have been very impressive indeed. There is no reason why we in India should not succeed in the same manner. Lastly, it must be remembered that the gold-holder will be parting with his gold not for nothing but for interest-bearing securities which will bring him a decent income, thus benefiting him as well as the country. All this presupposes, however, that the war-machine is in the hands of a *national* Government and is employed in the service and safety of our country mainly.

CHAPTER XII

THE WHEELS OF INDUSTRY

It was remarked long ago by a cynical philosopher that civilisation marched on the gun-powder van. More recently it has been observed that in the realm of industry and applied science war hath its victories no less than peace. The relationship subsisting between international conflicts and industrial science is acknowledged to be intimate. In this connection, the question has been raised whether war is a science or an art. Clausewitz, the great military writer, considered that war could neither be classed as an art nor as a science. He held that war was a concomitant of social life, of conflicting group interests settled by force, and differing from other forms of social activity only through its resultant bloodshed. Judged from this standard of harsh reality, the relationship between the sciences and war is bound to be a close one, in that the latter harnesses to its flaming chariot all the resources of the former.

Two schools of thought are dominant today, concerning the beneficial effects of international conflicts on the arts and sciences. On the one hand, we have Bernhardi, Nietzsche and the blood-and-iron school generally, who believe that the pugnacious instincts of humanity have been responsible for most social advances. On the other, we have the writings of Bryce, Norman Angell, Romain Rolland, Bertrand Russell and hosts of other pacifists who consider war as the greatest curse of mankind. The truth of the matter probably lies between the two schools. The question, whether international estrangement has not given

an impetus in modern times to the progress of scientific discovery and to industrial advancement, remains no longer in doubt. It is in common evidence that technical research, starved of financial support in the lean times of peace, receives lavish encouragement when hostilities are threatened. One of the most important incentives to technical development has been the isolation of certain nations in times of discord. This forced isolation acts as a great stimulus to the search of substitutes or to new methods of production. The last War was the foster-parent of the German synthetic nitrate industry. The alkali trade of France in the same period is another example of this enforced versatility. The recent history of Japan offers many illustrations of the same compelling impetus to industrial self-sufficiency. We are told by Uspisaburo, a leading Japanese authority, that industries in Japan are either the direct or the indirect product of military requirements of the war of 1905-07. The Great War witnessed further revolutionary advancements in the arts and the sciences, not only of Japan but of every other combatant. The phenomenal progress in the science of aeronautics is a direct outcome of this titanic struggle. It is no exaggeration to say that aviation, as we know it today, is a child of the last War. Similar sentiments can be expressed as regards submarine navigation; there too we find technical research reacting powerfully to the war stimulus. Professor Rankine has remarked that the spurt in the knowledge of acoustics has been largely associated with the war conditions of 1914-18. A like opinion can be held concerning appliances like wireless telephony and telegraphy, in which vast improvements took place under the superior stress of military exigencies. In the realm of surgery, it is opined

by Sir Robert Jones that the last war was responsible for great orthopædic and other refinements which were the cause of a remarkable reduction in the rate of mortality and in the incidence of physical deformity. A whole new science of plastic surgery traces its genesis to the last War. Duels between nations have speeded up movement in the air, on the surface of land and water, and in the bosom of the ocean. It has led to remarkable inventions in the realms of physics and chemistry. Most of all, it has resulted in a wide and intensive exploitation of all mineral and animal resources of the world.

This chapter does not profess to justify the martial bias of mankind today but only to deal with its practical reactions on economics. It is evident, as emphasised above, that war and preparation for war have a tremendous influence on scientific and industrial advancement. To this extent any money which may be expended on the legitimate defences of our country will have *beneficent repercussions on our system of production* and our economic standards.

A problem, which has created much pother in learned circles, concerns the utility of rearmament expenditure in creating employment and in applying a much-needed spur to flagging industrial output. The consensus of English economic opinion now appears to be that the current £1500 million defence programme of Britain has gone a long way to pull English industry from the slough of depression into which it had fallen. Although it has not succeeded in completely eliminating unemployment owing to the peculiarities of the English system of unemployment insurance, it has absorbed all the available skilled labour in the country, creating even a famine in this type of workers. It has also given a fillip to lines of production

connected with the heavy industries and the shipping business. In America, also, the "big navy" drive and the large aviation orders are supposed to have come very opportunely to the business men who were harried by a series of lean years. In Germany the policy of martial Nazification of the country has worked miracles for the workless, whose number has reached almost a vanishing point. It was reported some time ago that as compared with the one-and-a-half million unemployed in Britain (population 40 millions) and the seven or eight millions in U.S.A. (population 120 millions), the figures for the unemployed in the Fatherland (population 74 millions) was only about five hundred thousand. More recently Dr. Goebbels stated that in Germany, unlike other countries, there were 300,000 jobs looking for men. French finance ministers similarly apply the soothing unction of additional employment to the heart of the hard-headed and economical Pierre Jacques, when approaching him with new demands on his purse, or rather his safely hidden stocking, for purposes of rearmament expenditure.

In India also, the scheme of planned defence will confer great relief on the swelling army of the jobless in whose bitterness and discontent the seeds of irreligion and doctrinaire radicalism are finding a fruitful soil. The question whether the beneficent effects of rearmament on production were not evanescent and somewhat illusory has been debated by publicists often with more heat than light. Those economists whose *forte* lies in pure dogma are critical of onerous expenditure, from borrowed money, on schemes which are professedly "unproductive." However, the view that the defence outlay confers a lasting benefit on industry and trade, especially at a time when conditions in all

branches of economic activity are seriously depressed, seems to be more correct. In a free country, the defence budget works like a pick-me-up injected into the body economic, creating sufficient internal reaction to make it recover its tone and to sustain it when the stimulus is withdrawn. Large-scale expenditure by public borrowing contributes to the general good by reducing involuntary unemployment and by setting again on motion the clogged wheels of industry. In a country, where a large mass of humanity are habitually idle and traditionally inefficient the chances of success in this direction are still greater.

In this connection, the opinion of Mr. Keynes, the eminent English economist, is apposite. In his words, "Loan expenditure may enrich the community on the balance. Pyramid-building, earthquakes, and even wars may serve to increase wealth if the education of our statesmen in the principles of the classical economists stands in the way of anything better." This somewhat extreme dictum may be taken as merely illustrative of a possible trend in the direction of attuning public expenditure to unemployment relief. In India, the problem is slightly different from what it is in advanced countries. We have large sections of our population permanently unemployed. This has resulted in an undue pressure on the soil, and an intolerable strain on the accommodating capacity of the joint-family system. The consequence has been a steady deterioration even in the limited standard of life of the lower classes. The peasant has considerable leisure which he moons away in sheer idleness; the middle and upper classes have considerable capital savings which are at present lying sterile. If the demands of our defence programme bring together this unutilised leisure and this

unexploited capital there can be no loss to the community, for it would not be diverting to unproductive channels labour or capital which is already able to find productive employment. The argument of "additional jobs" used by protagonists of rearmament in advanced countries like Germany or England will apply *a fortiori* to India where involuntary idleness and empty accumulation of money are at present a common feature of the economic system.

The close community of interest and method between armament expenditure and industrial expansion has already been indicated. Both form the pillars on which the arch of social well-being and security must be set up; they are the warp and woof of the country's industrial fabric. A state which is weak in her productive equipment can never hope to be strategically self-sufficient or powerful; for, modern wars require a multiplicity of weapons whose production and continued supply can only be undertaken by up-to-date industrial plants within the country. Reliance cannot be placed on foreign supplies, as these are likely to peter out at critical moments or be cut off by enemy action. The economic, as well as the military, salvation of India therefore lies in a *rapid industrialisation of the country*. The same Five-Year Plan which would tackle the problem of our defence should also be extended to the question of the rapid extension of manufactures within the country.

In this connection a passing reference may be made to the determined attack on the "capitalist" system and profit motive at present being made by radical groups which seem to thrive on spiritual nourishment borrowed from the West. Our recent political struggles coupled with acute social distress have been the occasion of a doctrinaire invasion of the country from abroad. A steady ideological breeze has

been blowing from the direction of Moscow and the Leftist groups in England, with the result that, to a class of radical thinkers in India, Karl Marx has become the Allah of a new social religion, with Lenin as his prophet. The devotees of this new evangel with such dubious deities, would convert India into a syndicalist paradise where property and private ownership will be non-existent and where everyone will enjoy the good things of the earth according to his needs and deserts. The socialists in India fall into several categories. At the top are the few intellectual giants: men of vision, humanity and ardent patriotism, who have sacrificed heavily in the nation's cause, and who, in return, have been made the accredited leaders of the people, and the spokesmen of the dumb, driven, millions of the country. Next come what are called parlour-pinks, a sort of drawing-room Bolshevists, who are well endowed with the world's goods and are seen arriving in high-powered cars at public meetings, where they inveigh in words of learned length and thundering sound against the evils of capitalism, only to retire subsequently to well-cooked dinners at their nice suburban bungalows. Then, we have the half-baked political socialists, who are essentially bourgeois by birth, outlook, and upbringing, but who delight in haranguing against the propertied classes with a view to canvas political support and to satisfy an inner urge for megalomania. Behind these stand the handful of working-class Reds, who though weak in theory and argument, are strong in the power of their vocal chords and in their infinite capacity to queer the pitch of lumbering officialdom. Finally, there abound the Marxist intellectuals, often brilliant products of the universities, who out of conviction or cussedness, are antipathetic to the entire established order or disorder of things. Today there is

such a spiritual onslaught on the existing order, as the world had never seen before. An unholy alliance between the Jewry and international communism has resulted in the platform, the silver screen, and the cheaper class of literature being infected with a strong ultra-radical virus. Even the yellow press, which hitherto was contented to portray life as a three-ring circus of sport, crime, and sex, has turned to a depiction, in lurid phrases, of the many economic and social sins of private property as seen through the coloured glasses supplied by the Third Internationale. But in spite of this many-shared ploughing of the Indian soil, the seeds of Marxism are not likely to thrive in our country. It is realised on all hands that the problem of India today is one of production and exchange and not so much of consumption and distribution. There must be enough of wealth in the country before one can share it. Moreover, to most Indians, the Soviet is still the Big Bad Wolf of world politics and its spiritual emanations are strongly suspect. Our social customs, our laws of property, our religious heritage, and our strong family instincts are all factors which will act as an anodyne to these new-fangled economic irritants. Once our country obtains the substance of independence, and once the pressing need for a common front is removed, it is certain that the centrifugal tendencies which are dormant between our incongruous ideological political groups will assert themselves. When this happens, the days of militant communism will be numbered. This does not mean that a large dose of state socialism will not be good to our body politic. A levelling-up of the masses of the people, together with an extension of beneficial state activities to the poor and the down-trodden is urgently indicated. It will be the height of folly if our political

leaders do not always bear this in mind and forestall, by energetic state socialism, the dreaded evils of chaotic communism.

Today in India we have two distinct ideologies, working partly against one another and partly in collaboration. On the one side, there is the sentimental puritanism, tinged by a peculiar Jain orthodoxy, which believes in retaining all our backwardness, whether in the economic, or in the educational, or in the military sphere. It glorifies our failings into virtues. It exalts our physical weakness into the principle of *Ahimsa*, and refuses to see any good whatever in our development of physical and martial strength. It raises the necessity of our poverty and economic misery to the virtue of simplicity and renunciation, by seeking to abolish, or at least delimit, our human wants, even while millions of Indians are barely satisfying their wants on a subsistence basis. It abhors the adoption of modern industrial technique, in the smug belief that by thus fighting shy of mechanisation and of the fruits of human progress in science and industry, we would be living in pristine purity; and at the same time it cherishes a vague ambition to raise the economic standards of life of the poor masses. It conveniently forgets that these very masses do not belong to the saintly order of beings, but are, like ordinary mortals, as fond, as any other people, of the good things of life, including decent food, proper clothing, and all the modern amenities of existence. It seeks to foist upon a life-loving people the ideals of self-renunciation and unnecessary self-abnegation, which are appropriate perhaps to a religious life and to an other-worldly philosophy. In the educational sphere, also, it would fight shy of the methods of instruction adopted by modern pedagogy (which is based upon an

intensive study of child psychology), and would adopt a peculiar, hybrid system of its own, which is wholly unsuited to the requirements of a growing nation, ambitious to mark out a place in the sun for itself in the present-day world.

On the other hand, we have, as noted already, the other extreme of an imported philosophy which is also unsuited to the genius, culture, tradition, and social requirements of the country. It must be remembered that the conditions which prevailed in Russia prior to the Revolution were so serious that the system of economic and political life which emerged was the only one which could have been expected under the circumstances. In other western countries, the conditions of life are not so unequal or illiberal, nor are the principles of administration followed by the Governments so uninspired by ideals of social justice as to necessitate the one, sovereign remedy of bolshevism. In each of these non-bolshevik countries, such as England, France, United States, etc., however, the ideals of social justice have found due expression in beneficent social legislation and in welfare activities, and, therefore, we find the people, as a whole, contented with their own respective political systems. In Germany, on the other hand, the immediate requirements, *viz.*, the unwriting of the Treaty of Versailles and the wiping-out of the war blame had given rise to sentiments of a wholly different character, which were bound to bring about an entirely different alignment of political forces. Thus, it will appear that the peculiar environment of each country has been responsible for the shaping of its political philosophy. It must be admitted that, in our country, there are at present certain gross injustices and inequalities, caused by the heritage of the past. But these are neither so serious nor so irremediable

as to call for a complete social *bouleversement*, such as the one implied in communism, with its paraphernalia of strikes, direct action and a bitter class struggle. The immediate and most urgent problem in India today, which supervenes and overrides every other problem, is the problem of political and industrial freedom, of achieving the "substance" of independence and of retaining it in a barbarous world. When sufficient political power, based upon democratic principles, is available, it will be quite feasible for progressive Indians to use the agency of the State to ameliorate the lot of the masses, including the workers and peasants, by means of appropriate social legislation, property laws and welfare finance. The drastic remedy suggested by communism is not necessary for the comparatively minor failings of our social and economic systems. If, however, at any time in the future, it appears to the protagonists of the masses that the supremacy of the vested interests has become too obnoxious to the well-being of the proletariat, there will be ample opportunity and time for them to resort to the *ultima ratio* of communism.

It will appear from the above analysis that at present what is required is a concentration of our forces upon the sole issue of political and economic rights. Unfortunately, however, the two dominant strands of thought in the present-day Indian politics seem to be frittering away the energies of the nation upon either irrelevant or secondary issues. What is required, on the contrary, is the formation of a strong, well-organised nucleus of political opinion in the country which will lead to a concentrated convergence of our centrifugal forces towards the unification of the nation and the attainment and retention of our elementary political rights by timely rearmament. This convergence, more than

anything else, implies a regimentation of the masses and the classes on the lines suggested in this book.

As mentioned elsewhere, the pressing need of the country is an increase of industrial production. Industrial production is essentially a large-scale production. At present some orthodox Congressmen are obsessed with a desire to propagate cottage industries as a universal panacea for poverty. Since the recent Industrial Planning Committee was appointed at the instance of some of the Leftists in the Congress, the dovecots of the votaries of small-scale industrialism have been fluttered. It is said, firstly, that large-scale industrialisation will ruin our handicrafts; secondly, that it will not solve our problem of middle-class or educated unemployment but will actually aggravate it, by throwing out of employment a large number of artisans engaged at present in the handicrafts; and, thirdly, the fear is expressed that a sudden expansion of large-scale industries might lead to a plethora of goods which cannot be sold owing to the poverty of the masses. I shall deal with these, objections *seriatim*. In the first place, it is not quite true to say that the kind of large-scale industrialisation, involving the establishment of basic industries, such as power-supply industries, the heavy chemical industries, the automobile industry, etc., will come into conflict with any of our important handicrafts. The decline and ruin of our handicrafts has already been brought about by the impact of Industrial Revolution upon the Indian economy which took place in the latter half of the 19th century. Almost all the competitive goods produced by the Indian handicrafts in those days have vanished and their place has been taken up by machine-made goods imported from the west. One important handicraft, however, has survived effectively the

competition of the machine; this is the hand-loom industry in India which has even held its own against the established cotton textile industry of India. For the rest, articles of art, brassware and such other handicrafts are not likely to be ousted by large-scale industries, in any case. The ruin of the handicrafts, in so far as it is due to the machine, has already been completed by the imported articles from Europe, America and Japan. Those, who cry wolf and say that industrialisation in India will, at this stage, affect our handicrafts, are merely indulging in imaginary fears. I do not think that, on the whole, even admitting that some employment in the handicrafts is affected by large-scale industries, that there will be any general collapse of the handicrafts. If anything, there should be only a large expansion in our large-scale industries which will initially replace the imported products from Europe and Japan.

As regards the problem of employment, although it must be admitted that industrialisation will not provide an immediate solution of the entire problem of unemployment in India, still it is undoubtedly the only possible solution ultimately. It is notorious that agriculture has reached its technical limit of labour absorption, and that any progress of agricultural methods would only reduce the labour requirements on land. At the same time annually something like half a crore of population is being added to the existing stock. Thus the pressure on the soil is increasing tremendously. Agriculture cannot provide a solution to this eternal riddle of unemployment. If any solution is forthcoming, it must be from some other direction. In my view, industrialisation and the exigencies of Indian defence provide the only outlet for the teeming millions of India. I have already dealt with the question of employment in the

handicrafts, which being non-competitive mainly will not be affected by the establishment of our basic industries. The displacement, if any, will be caused in employment in those countries which sell goods to India. This provides the immediate scope for expansion. But the cumulative results of a growing internal economy will be felt later. It requires some constructive imagination to visualise the future development of industries in India. Here is an enormous potential market supported by millions of potential customers who are at present half-fed and half-clothed. This market must be nursed by increasing the productive capacity of the masses which at the same time will increase their consuming capacity as well. This brings us to the third objection raised by the critics, namely, that the goods produced by the industries may not be consumed. This, however, is an argument which assumes its own premises. If one single industry is developed enormously, it will, no doubt, lead to a glut of unsaleable goods produced by that industry, because purchasing power (which, in the final analysis, means productive power) has not been developed *pari passu* in *other* directions. But if several industries are developed, it will *not* lead to any glut. In the first place, as these industries will be largely replacing the imports from abroad, in the initial stages, the fear of unemployment is ungrounded, so far as this displacement is concerned. But in the later stages of industrialism, the increase in production of various industries must lead to a general rise in the standard of life of the people, which must make room for such expansion. It is the central doctrine of a magnificent book by Mr. Keynes, entitled the *General Theory of Employment, Interest and Money*, that aggregate purchasing power depends upon aggregate productive

power, or, in other words, the *aggregate supply function* must be equal to the *aggregate demand function.* Investment, according to him, leads to consumption and consumption to investment. Thus, increased investment in industrialisation, provided it is gradual and all-sided, need not lead to a glut. Those who are afraid of a glut in the internal market of India, basing their conclusion on the present low purchasing power of the masses, take a narrow vision of industrialisation. In fact, in a country like India, with its teeming millions and its well-balanced structure of raw-material and mineral wealth, there is a great scope for the development of internal markets and of a self-sufficient economy, which are not indeed to be rigidly marked off from the rest of the world but which can be developed into a comprehensive self-reliant organic system.

It is idle to expect that the puny efforts of dispersed village units will successfully withstand the powerful competition of large-sized plants enjoying all the benefits of mass production. It may smack of heresy to impugn the schemes for rural handicrafts and their development, but judged from a purely economic angle, those ventures which seek to revive long decadent industries, by planting them in a pastoral setting, are bound to crumble after the initial spoon-feeding by Governments and the sentimental support of the politically-minded are withdrawn. This is an age of automobiles not of "oxomobiles"; of industrial giants not of manufacturing midgets! This is an age of ruthless competition, in which survival of the fittest is the rule; if our industries are to hold their own against formidable rivals from abroad, there is no option for us but to adopt the most scientific and most modern methods of large-scale production. Only perhaps off-season occupations like dairy-

ing, poultry-farming, api-culture, basket-weaving and rope-making, wood-working, and such occupations as do not come into conflict with the Gargantuan mechanism of large-scale production, have some chance of surviving and assisting the rural economy. Moreover, there is also a limited possibility of encouraging certain cottage industries, in which intensive division of labour and division of processes are adopted for the making of different parts of an article, as is done in Japan, where all the mechanical appliances of large-scale production, such as electric power, etc., are utilised, and where each cottage is merely a unit workshop from amongst thousands of such workshops. This method combines the initiative, independence and personal touch of the small scale with the well-known benefits of the large scale, such as the economies of bulk buying, bulk selling, reduction of overhead charges and sustained competitive power.

It is a happy sign of the times that the Congress, at the instance of President Subhas Bose, has appointed a Planning Committee under the distinguished auspices of Pandit Jawaharlal Nehru. I have no doubt that, in view of the eminent personnel of the Committee, great and useful work will be done in the direction of industrialisation. The Congress plan has fluttered the dovecots of British financial and industrial circles, as is apparent from recent press comments in England on the Report of Sir Thomas Ainscough. The Trade Commissioner has predicted a financial collapse of the Government of India owing to a possible fall in customs revenue induced by diminished imports, and nothing but misery for the poor agriculturist, for whom, in the approved Imperialist style, he sheds some crocodile tears! The fact that British industrialists have developed cold feet shows that the Congress is working

along right lines and that the success of the planning programme is guaranteed. It is a travesty of the truth to say that agriculture will suffer as a result of the establishment of large-scale industries. In fact, industrialisation will not only create an enormous internal market for the products of agriculture but actually afford employment to thousands of idle villagers who are habitually unemployed or under-employed in the villages, and thus relieve the pressure on the soil. As regards the financial difficulties of the Government of India, it is a pure hallucination that in a country, where the general standards of income rise owing to industrialisation, a Government cannot recover sufficient revenues from the taxpayers. At the most, there will have to be a readjustment of the machinery of taxation, requiring the replacement of customs by internal taxes such as excise, and, in any case, income-tax returns must show large improvements. Nay, even the proposition that industrialisation will bring about a *fall* in imports, as a whole, needs proof. The greater likelihood is that the *character* of our import trade will continually change and perhaps even the volume might increase, thus bringing in more customs revenue than before. Those who think that imports will fall are considering only the substitution of present imports of certain goods by internal products. But what will really happen is that from decade to decade the character of our trade will change, as has always happened in industrially advanced countries, whose import trade has not suffered but actually increased owing to industrialisation. The increase is not merely due to imports of raw materials, but semi-manufactures and various types of new goods required by the rising standards of life. The pace of industrialisation in India, as in any other country, cannot

be so quick as to replace overnight every foreign import or make even a changing structure of import trade impossible. Self-sufficiency, in that sense, is not only unthinkable but also actually impossible.

However, the special point, which I would like to emphasise in this volume, is that the schemes which the Committee prepare for the development of large-scale industries should also adumbrate a plan for strengthening the future defences of our country and for diverting a portion of the national productive powers to the future requirements of the economics of war. It must be realised that, in the words of Adam Smith, "Defence is more important than opulence." What is the use of having so many industries and of raising the economic standards, if we are not in a position to enjoy the fruits of our labours, undisturbed and unmolested by ambitious empire-builders? No Nationalist Government, worth its name, can abdicate its duty and responsibility in the matter of defending the hearths and homes of its people. It is in this setting, therefore, that we must plan our industrial organisation.

The necessity for strategic autarchy has been already emphasised. Nations are organised today not only politically but also industrially, with a view, among other things, to the maintenance of their self-sufficiency in times of stress. The economics of warfare, in brief, has become as important as the economics of welfare. To this end extensive State control of all exports and imports is in common vogue. It is recognised even in countries where public opinion is ever on the *qui vive* and is easily mobilised, that mere appeal to patriotic sentiment is not sufficient to ensure patronage to indigenous goods, where differences in price or quality are adverse. For example, in London, it is said that the

shops dealing in cheap Japanese wares are flooded with custom from a class of people whose antipathy to Japan is pronounced. American public opinion is definitely hostile to the land of the Rising Sun; yet Japanese goods are making serious inroads into certain sections of the American market. In our own land, the popular dislike of Japan has not prevented a large influx of low-priced textiles, toys, scents and soaps from this enterprising country. Even as men cannot be made moral by legislation, they cannot be converted to *Swadeshi* by political propaganda alone. It has been found by bitter experience that to the average consumer, the purse comes before patriotism. Some compelling pressure, therefore, in the shape of high protective duties or even the prohibition of certain imports is necessary to turn popular minds to national goods. Such compulsion may not be quite popular at first, but with the growth of national consciousness and the realisation of its ultimate economic utility, it will be well-borne and tolerated.

Having argued (at considerable length, I am afraid) the case for a rapid industrialisation of our country on the basis of the existing social institutions, it may be germane to the purpose of this book to sketch briefly the lines on which progress can be made in this direction, keeping in view the defence needs of our country. For obvious reasons, this book cannot deal with the wider question of economic planning in all its technical aspects; but an attempt can be made here to touch lightly on the problem of industrialisation in its relation to India's urgent rearmament programme.

In the front rank among the materials of war stands petroleum, which is used in all the mechanised branches of

the Army and in the Air Force in large and ever-growing quantities. In a future war, the extent to which petrol will be consumed will be colossal. In the Chinese war, the Japanese have been using so much of this precious fluid that there is something like a petrol famine in Japan. Frantic attempts are being made to increase the supply, by converting the buses, trams and even pleasure-cars to charcoal burning and it is stated that even members of the royal family are setting an example to the common people in this direction. World politics in recent years has been largely a series of manoeuvres (pacific or otherwise) for the possession of oil. American dollar diplomacy and European power-politics were largely guided by the sinister promptings of the oil barons. The aggression on Persia and the annexation of Upper Burma were directly due to the desire to get at this liquid gold in these countries. The Allies further saw all the misdeeds of Turkish rule reflected in the rich oil wells of Mosul and Iraq. Volumes can be written about the history of the "peaceful penetration" of American oil interests into Mexico and Central America. Japan has similarly been casting loving eyes on the oil deposits in the Baikal region and in the Segallion Islands. All this reveals the great strategic importance of petroleum. Germany, lacking local supplies, is bartering for huge supplies of oil from Mexico (15 million barrels) and Rumania (5 million barrels). She is also subsidising the hydrogenation of coal ("Bergin") at great cost. In England also a similar encouragement to the liquefaction of coal is afforded at a cost of over £2 millions to the taxpayer. The Abyssinian war clearly reveals how King Oil has reserved for himself a front seat in the drama of modern wars.

India (*minus* Burma) unfortunately produces very little oil. The two oil companies operating in Assam and N.W.F. under foreign ownership produce about less than ·1 per cent of the world's supply, while Burma produces slightly over ·4 per cent.[1] The total production of India and Burma (about 350 million gallons) is insufficient to cater for our needs even in peace time and small quantities have to be imported from abroad, mainly from Persia and Russia. Other mineral oils (kerosene, liquid fuel and lubricating oils) are imported in large quantities (valued at about Rs. 6 crores). For strategic considerations alone, it is urgently necessary that we should augment our oil supplies, now that Burma is cut away from us. It is considered by geologists that oil is very likely to be found in the region of Kashmir, Nepal and the Himalayan Terai. Intensive efforts should be made to survey these regions by up-to-date methods. The oil sellers should be encouraged, or even compelled, to store up a sufficient quantity of petrol against war needs, as is done in Japan and Manchukuo. Our petrol resources should be husbanded by a wide popularisation of charcoal-burning transport. It is stated that a lorry fitted with a charcoal-burner will travel as much on a hundredweight of charcoal (cost, Rs. 1-8-0) as on five gallons of petrol (cost, Rs. 5 to Rs. 7-8-0). Rural electrification will stop in a large measure the drain of Rs. 3 crores paid for imported mineral oil at present. If we could only convert the half-a-million tons of molasses, now practically wasted, into fuel alcohol, we can increase our

[1] The U. S. A. produces 62·7% of the world's supply; Russia, 9·9%; Venezuela, 9·2%; Iran 3·8%; Dutch East Indies, 2·6%; Rumania, 2·5%; and Mexico, 4%. England, France, Germany and Italy produce no natural oil.

fuel oil supply by nearly 50 to 60 million gallons. Paucity of petrol will seriously impede not only our industrial self-sufficiency but our progress in rearmament[2] and the measures indicated above should be adopted with despatch.

Shellac is strategically an important material. India possesses almost a monopoly of this commodity, since synthetic substitutes are not satisfactory. Unfortunately, practically the whole of our production (varying between 500,000 and 600,000 cwts.) is exported to the industrialised western countries and to Japan, where it is used in making dyes, polishes, gramophone records, electric insulations and lithographic ink. During the Great War, the British War-Office demand for shellac (which is indispensable to the munitions industry) became so insistent that a rigorous export control had to be imposed, the financial advantage of which, however, mainly accrued to England and not to India. Early attempts should be made to conduct all the trade processes connected with the finished lac products inside our own country. Arrangements should also be made to purify lac so as to make it suitable for our own munitions industry.

In the matter of vegetable-oil lubricants also (which are essential to heavy armaments and mechanical transport), we are largely dependent on foreign imports, while strangely enough we are one of the world's largest exporters of oil seeds (valued at between Rs. 10 and 11 crores annually). Our military needs require that plants should be set up

[2] It may be necessary to open up a land (preferably motor) route to Burma for facilitating petrol and other transport. The author believes that it will be more economical to lay out good motor roads (on which charcoal- or crude-oil-driven trucks will ply) than to build a costly and obviously un-economic railroad, which will be more exposed to attack from the air in times of war.

within our borders for manufacturing on a commercial scale all the lubricants which we shall require for our peace-time needs as well as for the army.

Emphasis has been laid elsewhere in this book on the need for a scientifically planned and financially well-endowed automobile industry in our country, which would also cater for the aeronautical trade. The development of an automobile industry will facilitate the mechanisation of our fighting forces. If our rail services break down owing to enemy action, large-scale road transport will be essential and for this purpose an automobile factory within the country will be invaluable. Witness, for instance, the present plight of China which had to arrange foreign loans to buy enough lorries to carry its munitions overland. The automobile factories should be ordered to make all the aeroplane engines needed for our civil and military services. It is curious that England, which would go to distant Australia and New Zealand for new aeroplanes, should not think of India in this connection, although conditions here as regards raw materials and labour are very propitious.

The great urgency of providing ourselves with an adequate supply of armoured cars and mobile guns has already been stressed. These equipments can and should be produced as far as possible within the country in automobile and locomotive factories. The example of Russia, which in a few years stopped importing motor cars and trucks and which eventually started exporting excellent trucks, aeroplanes, tanks and armoured cars to Red Spain, China, Turkey, Afghanistan, Persia and Mexico, should serve as a beacon-light to us. India today is economically in a much stronger position than Russia was fifteen or twenty years ago. The manufacturing conditions in Europe and

America are so uncertain, their wages so high, their raw materials so inadequate, and their anxiety about, and pre-occupation with, their own defences so peremptory, that it is highly risky and speculative for India to rely upon supplies of munitions from them. The danger is aggravated by the fact that our communications may at any time be rendered ineffective by the new menace in the air.

As has been already said the establishment of three or four locomotive manufacture shops is a supreme desideratum. Possessing one of the world's largest systems of railways, we yet import practically all the steam-engines we require and to date we must have purchased not less than Rs. 200 crores of rolling stock from abroad (mainly from England). Yet every expert foreign visitor, who has inspected our railway workshops, has wondered why our locomotives should not be made in them. Of course any public expression of this opinion has been prevented by clever wire-pulling from the powers-that-be, who have often trotted out for public consumption, the familiar shibboleths about the lack of skilled labour, adequate machinery, or essential raw materials in the country as excuses, along with the question-begging argument that our total demand is insufficient to run a factory of an economic size. Yet it was a sporting Englishman who succeeded in making metre-gauge engines, right from raw materials, in a most unlikely place, *viz.*, Ajmer in Rajputana. He turned out in all 60 to 70 perfect specimens of the "Y" class locomotives, each at a cost about Rs. 10,000 less than the price of the imported product. This achievement is all the more remarkable seeing that he had no special facilities with regard to either labour or raw materials and his mechanical equipment was comparatively primitive. With

proper organisation and machinery, we should be able to make all the locomotives and rolling-stock underframes in the country at very favourable prices. Local production will also, in a measure, eliminate those possibly dangerous defects of design and execution which were demonstrated in connection with the ill-fated XB engines, since the turn-out of the engines can be effected in gradual instalments, after proper trial and experimentation, by agencies working in close collaboration with the Railway executives.[3] Further, in the event of a big War, if we continue to be dependent on alien assistance a break in sea communications will be disastrous to our transport systems. It may be remembered how the capture of 84 Chinese locomotives at Chengchow paralysed Chinese troop movements for a long time. Our locomotive workshops will also be useful in the manufacture of all the tanks, artillery and mobile guns which we require for the army. This practice of utilising railway workshops was adopted in western countries during the last War and is certain to be followed in the next one. We in India cannot develop in our midst at short notice huge armament firms like Krupp of Germany, Schneider-Creusot of France, Du Ponts of the United States, and Skoda of Bohemia. As a result, it is necessary to utilise our State-owned factories for the manufacture of those instruments of warfare, which require an exceptionally large industrial organisation and unlimited finance.

India can never be economically prosperous without a machine-tool industry within its borders. At present we

[3] A few years ago, the Chief Engineer of the South African Railways was dismissed, because he had purchased some German locomotives which, though of excellent design and make, were found to be lacking in balance. We await with interest the report of the Committee on the XB Engines.

import all the machines and most of the tools necessary for our heavy industries. Even comparatively simple appliances like water pumps and lifts are imported in large quantities from abroad, owing to lack of facilities for making them in the country. Even the few firms, like Kirloskar's, that venture to make machines of a simple and inexpensive character are unable to thrive fully for lack of Government support and of popular encouragement. India possesses all the natural advantages necessary for an indigenous machine-tool business. There is a huge market, plenty of raw materials and enough skilled labour. It needs only some effort in fiscal policy and organisation to produce locally all the lathes, cutters, planes, saws, drills and other precision tools necessary for our heavy industries. From a military point of view also, self-sufficiency in this respect is a matter of great urgency. If war breaks out our foreign supplies will be either blocked or available only intermittently at prohibitive prices. Our industries will be starved of machinery for extension and replacement and thus much national wealth will be lost. Most important of all, our accoutrements of war have necessarily to be made inside our own frontiers and this will be possible only if a simultaneous development of the machine-tool industry takes place. It is also possible that considerable internal economies may result from a local production of machines and tools, which are now obtained from abroad at unconscionable prices and which are not always suitable to the special needs of our industrial economy and do not always fit in with local conditions.

In the front rank among strategic materials stands iron. It has now been established that India possesses one of the largest deposits of ferrous ore in the world. Geologists think that apart from the United States, India will probably

be the largest producer of iron in the future. The extraction of iron ores has long been known in India and, as mentioned elsewhere, Indian archers 2500 years ago used iron-tipped arrows with deadly effect. Before the British came to India iron-smelting on a small scale was a national industry; but with the influx of cheap, flashing, Brummagem stuff and the withdrawal of Government support, the industry quickly died out. However, the foresight and determination of a big-hearted Parsee gentleman (Jamshedji Tata) were responsible for the introduction of large-scale modern methods of manufacturing iron and steel. In spite of his initial success and the great war-time utility of his undertaking, the Tata Company had to face several crises. The history of the Company proves not only the resisting power of a large-scale organisation backed by adequate finance but the troubles which are likely to afflict a key industry through circumstances which are not even remotely connected with its internal efficiency, such as dumping from abroad, or the formation of pools and trusts which, through regional price control, do not hesitate to scotch inconvenient "infant" competitors. But for the protective duties and bounties granted by the Government during 1924-34, the Tata Steel Works might have closed down. The fact of the matter is that British firms, who were supplying our rails and fish plates for nearly three quarters of a century, found it more paying to concentrate on higher sections of the steel industry so far as distant markets were concerned. This fact, coupled with the Indian Legislature's keen interest in the Tatas, saved the latter and incidentally many thousands of Indian investors. That this protection was justified is borne out by the present trend of steel prices, which are considerably higher in the west than in India.

The statistics of the production of, and trade in, pig-iron and steel make very interesting reading and are a strong commentary on the large lacunae in our industrial organisation. Last year we produced 1,644,000 tons of pig-iron (almost double that produced in 1932-33) but 629,000 tons of this stuff were exported, mostly to Japan, and to a smaller extent to England. We produced in the same year 921,000 tons of steel ingots (finished products = 873,000 tons) but imported 371,000 tons of iron and steel, of which 221,000 tons were of steel. We also exported on an average about 100,000 tons of iron and steel scrap, here again mostly to Japan.[4] These figures show that we are not yet equipped for the manufacture of the better ranges of finished steel goods, like railroad materials, and machinery for even our own cotton, jute, cement, and sugar mills. In the interests of our strategic self-sufficiency, immediate steps should be taken for the establishment of large-scale steel works for the manufacture of all the higher grades of steel goods which we need. The examples of Russia and Czecho-slovakia show how comparatively easy it is to develop an industry of this sort within a reasonable period with the public's support and financial backing and with the assistance of foreign experts wherever needed. The export of pig-iron should be discouraged and that of iron and steel-scrap totally prohibited. At present in our country there is a colossal wastage in iron materials, and it is not rare to find dumps of iron scrap lying uncared-for, all over the country. Not infrequently, stock verifications of Government and Railway store-yards have revealed large quantities

[4] The proportion of scrap-iron used in the production of raw steel is 41% in Germany and 51% in England. In Japan the percentage is likely to be higher.

of forgotten iron scrap lying embedded in the ground. Rigorous measures should be taken against this wastage, as is done in Germany, where it is a penal offence to throw away iron scrap.

Reference has already been made elsewhere to the need for making India self-supporting in the matter of chemicals, both heavy and pharmaceutical. We import annually Rs. 3 crores worth of heavy chemicals (mainly sodium carbonate and other sodium compounds and sulphate of ammonia and phosphate of ammonia). We also import medicinal chemicals to the value of over Rs. 2 crores. As regards heavy chemicals there is absolutely no reason why the bulk of the demand should not be catered for locally. The present computations of comparative cost are largely misleading, for foreign supplies are mostly dumped at a loss by the foreign firms which hope to recoup the losses once the hounds of war are unleashed. In India, wherever cheap electric power or a plentiful supply of coal is available, heavy chemicals like nitrate and sulphate of ammonia can be easily manufactured. Various standardised processes ("Claude" "Cesale" and "Fauser") are in vogue in Germany, France and Italy and these can be copied here for the manufacture of ammonium compounds. Where cheap power is not available, it is stated, the "iron-contact" process can be utilised. One or two large-sized plants in Bihar and in the Central Provinces can be erected for the production of synthetic ammonia and the preparation of fertilizers and nitric acid. Already the Imperial Chemicals Ltd. and the State-assisted factory in Mysore are making some attempts in this direction and last year about 20,000 tons of sulphate of ammonia were produced in the country (as against the 65,000 tons, valued at Rs. 65 lakhs imported

from abroad). Since both ammonia and nitric acid are absolutely essential for the manufacture of explosives, the urgency of tackling this problem needs no great emphasis. Similar remarks will hold good as regards sulphuric acid, of which we manufactured about 600,000 cwts. last year, but the production has fallen off recently. If a national munitions industry on a large scale is to be established, our resources in the shape of sulphurous deposits should be more fully explored and exploited.

It has already been stated earlier in this volume how metals like copper, aluminium, antimony, tin and nickel are most vital from the defence point of view. An extensive mineralogical survey should be conducted to find out if further sources of these metals are available in the country. If augmentation of local production be not possible, large reserves should be accumulated as is done in most western countries. If only our countrymen in Malaya had been assisted and encouraged to purchase some of the tin mines in that country, when there was a slump in the business (as the Chinese and the Japanese are said to have done), we would have had valuable supplies of this precious metal in Indian hands.

Rubber is a material of great military importance, as it is useful to the transport and aviation industries and to various other branches of the defence services. The rubber tree is a native of India, but today our country produces only a small proportion of the world total. The average annual production (which is limited by international convention) is now about 21,000 tons, of which India (Malabar Coast and Mysore) produces about 12,000 tons, and Burma the balance. Before 1936, the bulk of our production was exported, mainly to the U.K. Since then two foreign

companies have established tyre and tube factories within our borders and the Travancore Government are also turning out finished products in a local factory. It seems urgently necessary that all the available rubber in the country should be converted in India into finished goods in the interests of our military needs. For this purpose, State-assisted factories should be set up at favourable points. Since Burma is now cut away from us, attempts should be made to extend the cultivation of rubber in those regions where conditions are propitious, so that we may be quite independent of foreign supplies at a time when our full programme of defence is in operation.

The leather industry has close connection with a country's defences, as leather equipments (army boots and shoes, harness and saddlery to mention only a few items) are prime necessities for the fighting forces. India at present is a great exporter of raw or tanned hides and skins (valued at Rs. 8 to 10 crores a year) and an importer of leather goods and even tanning material. A large-scale attempt to produce in our own country the Rs. 1 crore worth of tanning (wattle) bark appears to be indicated. Foreign companies (*e.g.*, the Batas), with expert technical assistance and plenitude of capital, have established themselves in our country, thus taking advantage of the cheapness in labour and raw materials and the slight protection which now is being afforded by Government. Liberal State assistance should be granted for the establishment of large factories with adequate machinery and finance, and controlled in the main by Indians.

Paraffin wax, which is a by-product of the petroleum industry, is indispensable to the munitions branch of the army. India and Burma together produce about 1,200,000

cwts. (valued at about Rs. 3 crores), most of which is exported to England, Netherlands, Belgium, and East and South Africa. During the war, the British War Office placed an embargo on the export of wax to foreign nations, and this factor, coupled with shortage of shipping accommodation, greatly reduced our exports, but since then exports have multiplied. In view of its great strategic importance, the wax should be purified and utilised in our own country either in the manufacture of munitions, or in the various branches of peace-time trade.

It will be beyond the scope of this book to embark on a detailed description of all the materials which will be useful in times of war. Volumes can be written about the need for self-sufficiency or augmented production in such commodities like gunny bags, electric cables and motors, telephone and radio appliances, all of which are of great importance in an international conflict. But enough has been said to emphasise the three-fold aim of a war economy, *viz.*, (1) to cover the requirements of raw materials in such a way that the State can do without imports when at war, (2) to make possible a rapid adaptation of production from a peace to a war economy, and (3) to keep the door open for the importation of essential commodities from abroad. Fortunately, our country is rich in most raw materials and needs only a limited margin of imports. But, the transformation of our economic system from a mainly agricultural to an agricultural-*cum*-industrial stage, attuned to the economics of war, is a task which requires urgent solution from the best brains in the country.

* * * * *

My task is done. It has been a labour of love undertaken with diffidence and executed, I am sure, with much

imperfection. Some of the ideas expressed in this volume may be of a highly controversial nature. But I hope that this book will serve at least the purpose, for which it is written, *viz.*, develop a school of thought in our country which would take cognizance of the realities of the international situation and the urgency of our military needs. Physical fitness and military preparedness are the *Zeitgeist* of the age. Gone are the beliefs in the supremacy of the devotional virtues, in the Biblical adage of the meek inheriting the earth. Faı from lording it over the world, the *cognoscenti* assert that the meek (who are synonymous with the weak) will have no rights, no privileges, no political loyalties and no international regard. Our troubled globe is witnessing today an apotheosis of might and power-politics, which have become the vogue in international relationships. The Gandhian philosophy of unadulterated passivity, which would refrain from resisting violently a foreign marauder but would convert him and make him retract from his evil purpose by gentle remonstrance and heroic suffering, is essentially a counsel of perfection. We may not believe like Nietzsche that might is the supreme right; but we must recognise that in the present *débâcle* of idealism and justice, soul force is no substitute for submarines, or *ahimsa* for artillery. To delude ourselves into a contrary belief is to live in a fool's paradise, which will not long remain a paradise, of course, but will become a purgatory like unto what the Chinese are going through at present. *Satyagraha* is a desirable virtue but it can be practised as well within a breast-work of defences as without it. Swami Vivekananda used to tell critics of physical culture that one can understand the *Vedas* as well with stronger biceps and thicker calves. Similarly, we can

achieve this "truth-grasping," so dear to the hearts of our great leaders, with our bandoleers well-filled and our rifles well-oiled. Like that of Cromwell, our policy should be to trust in God, but to keep our powder dry. Thus, I conclude this monograph, dedicated to the military security of India, by once more quoting the great Swami, who, in a high measure, combined political sagacity with religious fervour:—

AWAKE, ARISE, OR BE FOR EVER FALLEN!

APPENDIX A

A NOTE ON A. R. P.

A. R. P. or Air Raid Precaution is the passive side of national defence, the active counterpart of it being the resistance in air and from land. The chief aims of A. R. P. are the mobilisation of all non-combatant man-power and resources with a view to minimising the results of air attack, releasing combatants for more essential purposes and spiritually organising the will to resist among the people. We have already seen that the purpose of the enemy will be exactly what the A. R. P. is intent on neutralising, that is, the perpetration of as much strategic damage as possible among the civilian population and property, and the creation of a spirit of demoralisation and disaffection among the masses. In a future war, it is hoped to achieve more results by civilian bombing than was ever the case before.[1] The effects of aerial attacks, terrible as they are, are felt less in a field of battle, where they are foreseen and organised against, than in the centres of civil life where large masses of unprotected and scared humanity congregate. The technique of warfare has undergone sufficient changes to neutralise partially the severe consequences of aeroplane attacks on the front-line troops, but the civilian organisations have not yet reached a sufficiently high standard of efficiency to ensure appreciable protection to the non-combatants far behind the lines. In

[1] The Hague Convention IV (I) of 1899 prohibited the launching of projectiles from the air. This prohibition was reaffirmed in the Hague Conference of 1907. During the Great War, this prohibition was generally disregarded by both sides. The Washington Conference of 1921 dealt with the subject of aerial attack and laid down certain conventions, the most important of which (Article 22) was that "aerial bombardment for the purpose of terrorising the civilian population, of destroying or damaging private property not of a military character, or of injuring non-combatants is prohibited." Article 24 stipulated that aerial bombardment would be legitimate only when directed against well-defined military objectives. (Cf. K. R. R. Sastry, *International Law*, pp. 345—53.) All these are likely to be brushed aside in the next war.

the fighting area, all possible safeguards are taken to ensure minimum damage to personnel. Trenches are cut, concrete emplacements are made, deep dug-outs constructed and efficient preventive action taken against direct air attacks. In the case of civilians, however, the methods of defence have not made much progress, largely because of lack of experience as well as owing to the very difficult nature of the problem itself.

Experts believe that in the battle-fronts, the aeroplane has not generally altered the balance of strength where the opposing forces are more or less equally matched in quality and strength and where efficient precautions are taken. In the battle on the Ebro in Spain, it was found that repeated aerial bombardments could not shake off the Red troops from their mountain perches, as the men were able to get into their tunnelled quarters and dug-outs during a raid and emerge later without many casualties. The same was the case at Changkufeng where an immense aerial bombardment by the Russians failed to dislodge the Japs from the hill-top. Recently, when the Sudeten Maginot Line was handed over to Germany, the Germans experimented with a section of this line by bombarding it for several hours with artillery and aircraft. It was declared that the result of the artillery bombardment was almost *nil,* and that only one out of sixty concrete shelters attacked by the bombers, was shattered. This shows that key positions can be made bomb-proof from the air, provided money is no consideration. The difficulty is that bomb-proofing cannot be achieved on a large scale for the masses except at a cost and preparation to which few nations are equal.

Any discussion on A. R. P. is as yet only theoretical, since the world has had no experience yet of that form of wholesale civilian bombardment which will be the vogue in a future war. The Spanish, the Chinese and the Abyssinian wars have been conducted on a minor scale and between forces which in the main have been unequally matched in the air. The result is that the mechanics of aerial warfare have not been tuned in these cases to that high pitch of destructive ruthlessness which they will attain in to-morrow's war *a outrance.* Till now it is nowhere in evidence that the dreaded agents of death, such as poison gas and epidemic bacteria,

have been used on a mass scale in recent wars. In the last war it is true that lethal gas was used, but it was employed only against combatants. Allegations have been made against the Italians in Abyssinia and the Japanese in China regarding the use of gas, but this, if true, will appear to have been the case only on battle-fronts. It can be taken, therefore, that deliberate and consistent bombardment of the civil population has not yet been attempted on any important scale, though very recently General Franco appeared to have threatened such a step in Catalonia and the Japanese are accused of having done it in the Province of Suiyan, the home of the Communist movement in China. As a consequence, the effects of such a bombardment are a matter more for surmise than for inductive reasoning. But enough is known of its terrible potentialities to make A. R. P. urgently necessary for every country threatened with this new danger.

A brief description of the routine of active air-raid precautions may be attempted here. They consist essentially of the following:—

A. Counter-attack in the air.

B. Anti-aircraft gunnery.

C. Balloon barrage.

A. *Counter-attack.*—The *modus operandi* of counter-attack has already been indicated in this volume. The defence force will consist of fighters and chasers who will meet the attacking bombers and their escorts before they reach their objective and try to bring down as many of them as possible. At one time it was believed that it would be feasible, provided sufficient notice was available, that a sufficiently large number of casualties could be inflicted on the raiders so as to make the net damage negligible. Recent expert opinion is, however, less optimistic in view of the speed, range, protective armouring, and artillery of the bombers and their comparative suddenness and silence in a raid. It is true that vast improvements have been made in electrical sound-detecting apparatus but if the raiders rise high, and shut off their engines (as the Italians from Majorca are supposed to have done while attacking Catalonia, and the Germans are expected to do while attacking London), then these appliances are of little utility. The great

danger to cities like London lies, therefore, in the suddenness of attack. If the raiders are not noticed in sufficient time (which is estimated to be a minimum of 30 minutes), then the raiders may be on the top of the city, destroying hangars and aerodromes before the defenders can take to the air. This necessitates protected hangars and underground shelters and catapulting machines for sending the aeroplanes into the sky when the aerodromes are out of commission. In the Chinese war, the Japanese frequently made lightning raids on Chinese aerodromes and claimed to have destroyed large numbers of fighting planes before they could leave the ground. It is this possibility which has induced Germany to provide herself with a number of hangars with underground bombproof shelters for the aircraft.

In India the danger of *sudden* raids is not very great, because our country is far removed from the nearest potential enemy, (Italy or Japan) and at either end there are outposts of the British Empire which would send us warning in case enemy planes are sighted. In the West, however, it is possible for Italian planes to leave Africa aboard an air-craft carrier (as was done by the Japanese air force in the Chinese war) and after evading the watching naval defence units, if any, attack our western cities from a distance of a hundred or fifty miles from the land. What is more probable, a landing may be effected by the enemy forces on an unprotected strip of our territory, after which an aerodrome will be laid out, and aeroplanes landed for aerial operations. It may be remembered that the advance of the Japanese into the interior of China was facilitated by the simultaneous setting up of aerodromes in the rear of the advancing troops. It is obvious that in spite of vigilant counter-attack many of the bombers will break through and threaten to unload their deadly missiles on the civilian population. This necessitates the second item of active defence, *viz.*, anti-aircraft gunnery.

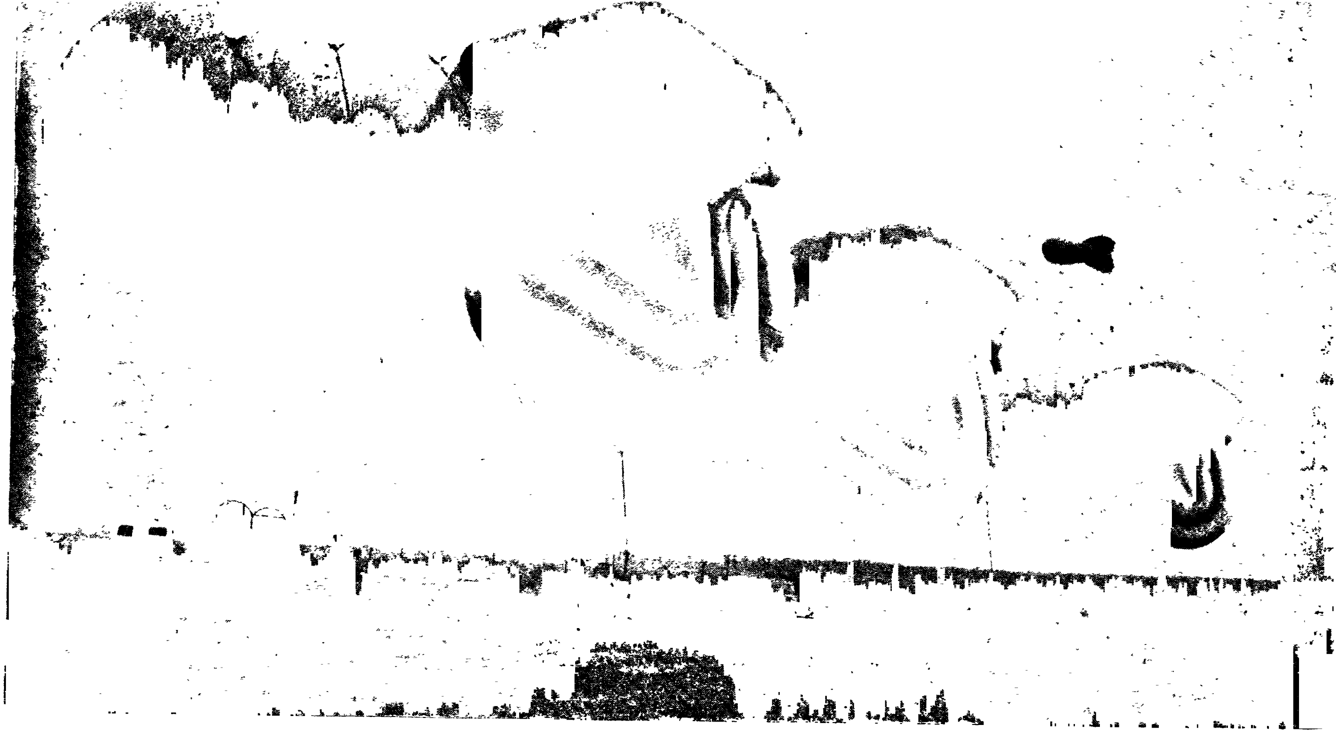
B. *Anti-aircraft gunnery.*—Some details of this weapon have already been given in the body of this book. Some years ago the guns were somewhat rudimentary and during the last war the "Archies" were objects of considerable derision, as at best they merely scared off the invaders and rarely made hits. Recently,

however, very striking improvements have been made in these guns. Their effective range has been increased to 20,000 feet and the spread of the bullets correspondingly augmented. The original size (3″) has now been given up and the recent important types are the French 77 m.m. and the British 3·7″s; but an improved type of 4″ size is now under production, as this is supposed to be useful against machines flying lower than 10,000 feet.

These anti-aircraft guns are intended to be stationed in big towers at all the key-points like government offices, electric-power and water-supply stations, essential factories, bridges, batteries, military works, even hospitals and food-storage depots. If a sufficient number is kept at strategic points, these can be prevented from being damaged, although the experience in the Chinese war had shown (*e.g.*, the bombing of the electric power-house at Nanking and the water-station at Canton) that daring and lucky airmen can inflict heavy damage despite vigorous gunnery directed against them. It is generally admitted that the speed and capacity of airplanes is consistently outdistancing the efficacy of the anti-aircraft guns. In the Spanish war the casualties by gunfire are stated to be less than 10%. Besides, the planes, if they keep above 20,000 feet as they often do when no definite objective is desired but merely an indiscriminate slaughter of the civilians, they escape much damage. Recent inventions of secret bombing sights now enable bombers to fly at a height of 24,000 feet and still register hits in a large number of cases. In the attack on a civil population in strongly protected cities, the bombers will fly high and broadcast their dreaded load on the huddled mass of humanity inhabiting those ant-heaps of brick-boxes, which are our big cities to-day. The guns, moreover, are useless on foggy or cloudy days when the raiders will be invisible or safely hidden behind the cloud banks. In India there is no danger of fog but in European cities the phenomenon is only too frequently experienced. London and Paris especially are considered to suffer from this disability, since the airmen can remain unobserved in the fog, while their objectives will be outlined for them by the course of the Thames and of the Seine. At night, of

course, the guns will be silent without powerful search-lights and these are as essential as the fire-arm itself. But if electric current fails and if there is no emergency supply then the search-lights will be useless. Hence the attempts to keep secret electric storage arrangements for use when the general supply fails. (President Roosevelt announced recently that he would spend 200 million dollars on emergency generating plants.) Much reliance is not placed on these guns for protecting the ordinary population of big cities. Their supply is also limited and their distribution uneven. In England, as mentioned elsewhere, there was a tendency to concentrate the guns in London leaving the other big industrial cities less protected. Readers may remember the " Sandys-storm " which was raised in the House of Commons by a criticism of the short supply and unscientific location of these guns, which criticism was found to be very well-founded at the time of Czech crisis. In India there is every reason to lay in a good store of these guns and keep them ready in our western towns near all the key positions as already mentioned in the book. The handling of these guns (except the actual mechanical operation of aiming) is usually done by trained volunteers in the West; and here also squads of volunteers (including mechanics, drivers, and fatigue-men) should be instructed for the purpose. Every important factory should be asked to provide itself with one or more of these guns and the public buildings should be protected at the expense of either municipal or state funds. In England there is a tussle going on as to who should foot the bill for these equipments and it looks as if the local bodies will win. In India also it is unlikely that the city-fathers will be able to pay their share. It is imperative, therefore, to protect the bridges, railways, docks, hospitals and public buildings in our more important cities at public cost, which will be heavy but necessary because the danger is sufficiently great to justify the expenditure.

C. *Balloon barrage.*—Balloon barrage is an English idea. It consists of an encircling line of hydrogen-filled gas-bags floating in the air and supporting a network of wires which will prevent the air raiders flying low over the city and thus escape the anti-aircraft guns. The gas-bags will be moored to the ground by



A section of the balloon barrage in use in London.

means of wire ropes, worked by machine-driven winches and pulleys.

The balloon barrage had never yet been tried under war conditions. The objections to it are many and serious. First is the question of cost. It is estimated that for London alone an expenditure of £11 millions will be necessary. At this rate to protect all the big cities in England and Scotland will cost nearly £100 millions. For this sum no less than 10,000 high-quality fighting aeroplanes can be produced. It is for this reason of expensiveness that the French Government abandoned the barrage idea for Paris. Secondly, the man-power required for working the "sausages," as the gas-bags are called, is enormous. For London, it was estimated at 40,000 men. The requirement for all the cities will be staggering. At a time of crisis, when there will be panic among the people and a large number of able-bodied men will be required for active service and for work in various martial activities, it will be difficult to provide the necessary man-power. Then, again, the balloons have the trick of breaking away from their moorings at the slightest breeze. Recently, in the London rehearsal a number of the bags got free and were captured only with difficulty. On a day when a steady wind is blowing the bags cannot be sent up at all. The most serious objection to the scheme, however, lies in the fact that the Germans have now invented a special contrivance which will enable an aeroplane to cut through the protecting wire nets, even when they are charged with electricity, as has been proposed that they should be. This completely negatives the utility of the barrage and it is likely, therefore, that it will be abandoned as a general proposition. In our country we have neither the resources, nor the urgent need for such a barrage and as such its inclusion in our scheme of defences need not be seriously considered.

Let us now turn to the *passive* side of the A. R. P. The principal measures envisaged by passive A. R. P. are the following:—

A. Evacuation,
B. Entrenchment,
C. Volunteer organisations.

A. *Evacuation.*—It is now generally recognised that protection *in situ* is a thing which is not possible for the mass of the civil population of a city. Modern high explosive bombs are of such terrible potency that the "'brick boxes" in which most of us live can scarcely stand up against them. To keep inside a house when bombs are indiscriminately being rained on a city, is to court a painful and not too speedy death. As has been mentioned elsewhere a 2000-lb. bomb can blow a hole the size and depth of a city block. Yet some sort of protection can be obtained even against explosive bombs by the construction of efficient concrete cellars. It has been estimated that a subterranean refuge with a three-foot concrete roof and a fifteen-foot layer of earth over it will be able to resist even a direct hit by a 1-ton bomb. The cost of constructing such a cellar is estimated at between £3 and £5 per head. For a family of five people the cost will, therefore, be about £20 or Rs. 270 only. Two difficulties stand in the way of the cellar idea. They relate to cost and space respectively. To provide cellars for about ten million town dwellers will mean an outlay of nearly £50 millions. This would impose a severe strain on public finances even in a rich country like England, but the English ministers have committed themselves to the idea to some extent although recently it was announced that only steel splinter-proof shelters would be provided at public cost. In less opulent areas the proposition can be ruled out as a universal safety measure. Secondly every cellar requires a minimum of free space like a garden or other open ground and this is difficult to come by in crowded slums like those of East London, Mont Martre in Paris, or the Nall Bazaar area in Bombay. It may be admitted, however, that in Madrid and in Barcelona the old domestic cellars have been a veritable haven of refuge to the poor. But for the scientific and methodical fashion in which the masses of the people crowded into the subterranean chambers at the first warning of a raid, the toll of lives might have been larger in the Spanish cities. The question, however, how far these cellars, crude and ill-equipped as they are, will provide adequate protection if poison gas or large-size incendiary bombs are used, as they will be in the next war, is still unanswered. It is generally believed that these refuges will prove mere death-

traps unless they are made absolutely air-tight and equipped also with all the essentials of life for a fairly prolonged stay. Although, as pointed out above, the utility of underground shelters is somewhat discounted in well-informed circles, it yet behoves all citizens who have the money and the space and who live in cities on which the dark shadow of war is likely to fall (such as Karachi, Bombay, Lahore, Delhi, Calcutta and Madras, in India), to provide their families with a shelter below ground which may be available when other methods of escape are not ready to hand. During the last war, landlords used to resort to wire-nets on the top of their houses and this practice is still adopted by the less-informed in China to-day. The incendiary and delayed-action bombs are, however, inescapable by such devices, and no money need be spent on wire-roofing the houses, in India.[2]

In big cities in the West, the underground railway tunnels are spoken of as refuges for the poorer classes. It may be remembered that at the time of the Munich crisis certain structural alterations were being made to the "tubes" in London. The alterations were probably connected with the widening of the exits and entrances as these at present are contrived to retard uncontrolled and hurried movements of people rather than facilitate

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[2] An "air protection tower"—which will shelter 575 people during an air raid and which is claimed to be absolutely bomb-proof—was one of the most interesting "exhibits" at Germany's largest aeronautical research centre.

The "air protection tower" is cylindrical and stands 25 feet high. People sheltering in it first pass through a tunnel which is later sealed, and then enter a low circular room with benches to seat 175 persons.

A spiral staircase leads up to the other three floors, each of which contains a similar chamber. The second floor can accommodate 140, the third 120 and the fourth 140 people. There are no windows. Air is provided by a mechanical plant and is continually changed. In case of a gas attack it can be filtered.

The "roof" of the tower is over five feet thick and is said to be completely bomb-proof.

The foreign delegates were particularly impressed by the tower which, it is understood, has not been produced outside Germany.

them. A very short while ago, it was given out that the Government had authorised the construction of another tube railway below the Thames, and this sanction might be prompted, partly, at least, by strategic considerations. There are two great drawbacks in the use of the underground railways and these are, firstly, that there may be accidents due to the people coming in contact with the "live" rails and wires (in the event of a rush) and, secondly, that they may be practically cooped up in the tunnels by the severance of electric connections which are necessary for lighting, and for working the lifts. With proper safeguards, however, the tunnels are excellent refuges for the slum-dwellers in the vicinity. In India, however, there are no tube railways and, therefore, the question of their utility does not arise.

Seeing that protection *in situ* is so difficult, even in the advanced West, the alternative of evacuation has been proposed. Much public wrangling has taken place in European countries between the comparative merits of evacuation and entrenchment, and two definite schools of thought have been evolved. Writers like Garratt believe in the idea of dispersion, while the school headed by J. B. S. Haldane advocates "digging in." Probably the golden mean consists in a judicious admixture of the two methods.

Evacuation would aim at removing from the zone of civilian attack, *viz.*, the big cities, all the people who are an unnecessary encumbrance in the area. First come the women in a delicate state, whose exposure to air raids may cause premature births. Then come the children, the aged, the sick and the crippled, who are best out of the way. Finally begins the removal of other able-bodied persons of both sexes who are not essential for the manning of the A. R. P. organization and for keeping the essential services and supplies going. A good deal of learned controversy has taken place regarding the method and agency of "dispersion." It is now agreed that evacuation cannot be made to "new" houses, but only to other peoples' houses and to temporary camps with community kitchens, and with hospital and nursing services. The task of evacuation is a most difficult one as the London attempt in September, 1938, showed, when a large number of children were left stranded. The zones of danger must be marked out and

safety areas arranged near to hand for each danger zone. Elaborate registration and rehearsal may be necessary if one is to avoid a disastrous break-down at the critical moment. The roads have to be kept clear of all private motor traffic and the railway services commandeered for A. R. P. movements only. The talk of quick evacuation handled out by optimistic public men is very much an exaggeration. The question whether removal should be made by families or by categories (children, women, etc.) is still unsettled. In England, feeling is strong that the Conservative Government should do nothing to show any discrimination in favour of the upper classes, as this would provoke the workers into retaliation which may neutarlise the well-meant efforts of A. R. P.

In India, as pointed out elsewhere in this book, the problem is simplified, to some extent, by the fact that our city population is small and, in a sense, migratory. Most of our town-dwellers either own houses in villages or have relations and close friends with whom they could lodge and board in times of necessity. There is no acute shortage of housing accommodation as in the West, even though the quality may not be comparable, and our climate is such that getting under cover immediately, is not a problem of urgency. The open space available round about big towns are also large. It is doubtful if a mass attack on the civilians here will produce the same results which they will, for example, in England. The class distinctions in our country are not so sharply marked and there will not probably be a proletarian reaction as feared in the Western democracies if the enemy should concentrate on the poorer sections of the towns during air attacks. In China, the air raids merely closed the ranks of the defenders and in India also a similar result can be hoped for. Further, our towns are not national " nerve centres " like Paris or London, and even if they are damaged or taken, they will not lead to a partial paralysis of Government, as the capture of London or Berlin would do. But this does not mean that efficient and speedy evacuation should not be arranged for our superfluous city population, to avoid unnecessary loss of life and possible demoralisation. At the earliest sign of war, the children, the *enciente* women, the sick

and the old, should be removed without panic and sent to temporary homes of their choice. The convalescent and the semi-convalescent should be moved out of the hospitals which should be enlarged for additional emergency demands. The schools and other public buildings should be converted for the strategic uses of A. R. P. Of the able-bodied those who are not required for the purpose of active or passive defence and for essential services should be encouraged to move out of the towns which, if cut off or beleagured, will run short of food in no time. As pointed out in a previous chapter, the island of Bombay is particularly vulnerable in this respect.[3]

B. *Entrenchment.*—An alternative to evacuation is entrenchment, which consists in temporarily digging oneself in, instead of dispersing. It is obvious that all the population of a city cannot be evacuated, either because of traffic congestion, lack of notice, inertia and unwillingness of the people, and the break-down of transport arrangements. The Chinese are great believers in evacuation, thanks especially to the "scorched earth" policy of Chiang-Kai-Shek, who believes in destroying and setting fire to all abandoned cities, so that the Japanese (like Napoleon at Moscow), may be forced to starve and retreat. It may be remembered how an incalculable amount of property, industrial, strategic or otherwise was destroyed in towns like Tsintao, Nanking, Hankow and Canton. But this "scorched earth" policy has not been effective, as the Japanese army carries a good commissariat system and the reconstructive efforts of the Japanese High Command have been usually speedy and successful. A foolish and premature attempt at setting fire to Changsha (the temporary Chinese military headquarters) merely resulted in the loss of 5,000 lives and most of the city, without in any way impeding the Nippon steam-roller. In Spain, however, evacuation has not been the rule. It is true that owing to fear of retribution, several million socialists trekked into Catalonia after the Nationalist advance in North Spain, but a systematic and complete evacuation of raided cities has not been

[3] In Barcelona, owing to terrible food shortage, 40,000 cases of "pellagra" (a deficiency disease) have occurred during the last six months.



a great success. This is explained as due to the working-class Spaniards' stoicism, strength of will and phlegmatic determination which make him prefer sticking to his hearth and home and hiding in cellars, to moving out of his beloved town.

A great believer in entrenchment is Professor Haldane, who, in his latest book *A. R. P.*, gives the scientist's idea of air defence. He estimates that the physical effects of bombing have increased by nearly 10,000% in 20 years and cites the Spanish example to prove that evacuation and diffusion are fallacious devices and will fail especially in cases of sudden attack. For London, Prof. Haldane recommends a two-year programme for constructing 1100 miles of brick-lined trenches, about 60 feet deep and covered over (in which about 8 million people can take shelter), at an estimated cost of about £400 millions. The professor realises that many Britons will die rather than live like rats in a sewer, but he believes that it is futile to think of evacuation on a mass scale. According to him, the well-to-do will fly into the county or abroad to Eire (as many Londoners did in September, 1938) but the poorer classes, unable and unwilling to move, will be badly hit unless some arrangement, such as he suggests, is provided for them. The author pictures the German airmen not as setting fire to Central London but as attacking the traffic jams all round the doomed city destroying bridges and highways, and turning the fleeing Cockney humanity back to its habitat. He advocates the cutting up of all open spaces into zigzagging trenches as emergency refuges. Regarding gas, he harbours no great fear, as a greater number of people can be killed by high explosive than by gas and greater strategic damage done by incendiary shells. He advocates, however, the distribution of gas masks, as a one-ton gas bomb will poison effectively 120 million cubic feet of air, *i.e.*, it will place a layer of lethal atmosphere 12 feet high over half a square mile. In the words of this distinguished scientist, "A man standing within ten yards of a large bomb will be torn to pieces and the pieces thrown for hundreds of yards. A brick wall is not merely knocked down. It is shattered into a hail of projectiles which may kill people at a great distance." He further says that the high-blasting sound set up by the bombs will flatten out every-

thing, and that people far removed from the explosion will be deafened for life.

In spite of Haldane's enthusiasm for entrenchment it is curious that his essentially socialist doctrines of defence have not permeated the Soviet. Even in France, the evacuation principle is widely adopted in preference to "digging in." So far as India is concerned, the sort of elaborate entrenchment contemplated by Haldane appears to be impracticable. As we have already seen, the bombardment of our towns will not be on a scale comparable to what is likely to happen in the West. For example, it will be Germany's primary objective to destroy London, in order to paralyse the Imperial defences and thus win the war, but such tactics will not pay in India. Consequently, large-scale evacuation of the surplus population appears to be the only alternative, but this does not mean that the open spaces in our big cities should not be kept clear and ready for use in case the unexpected happens, and our big cities come in for concentrated attention from enemy bombers. Where it is not possible to disperse the civilians, emergency criss-cross trenches should be dug in these open spaces, in which the civilians can find temporary refuge.

C. *Volunteer organisations.*—These consist of medical, fire-fighting and decantamination volunteer squads, in addition to the personnel required for manning anti-aircraft weapons and the transport system. Germany is said to lead the world in the perfection of its civilian A. R. P. It is stated that there are over a million air-wardens in the big cities, each of whom will command a small company of volunteers. Every tenement, boarding-house and hotel has its air-warden, who, the moment the radio signals of aerial attack are broadcast, will collect his volunteers and assume what may be called "action stations." Each volunteer squad has its own doctors, nurses, firemen, poison-gas workers, and stretcher bearers. A compulsory census of all available man (and woman) power has been taken and an enforced enlistment in the volunteer battalions arranged. In England, on the contrary, the A. R. P. has not made any spectacular progress. This is due to want of drive at headquarters and to working-class apathy and suspicion. The recent exposure has whipped up flagging energies

to some extent but the progress made is still deplorably exiguous. Sir John Anderson, who is now in charge of the scheme, has undertaken a "National Register," which will include all volunteer workers to whom instruction and training will be imparted. It is stated that two million men and six hundred thousand women will be enrolled in this National Register which at present is proposed to be compiled on a voluntary basis.

The most important branch of the A. R. P. is that connected with the transport and the anti-aircraft gunnery sections. Automobile drivers and transport workers would be trained in their duties and allotted their regional jurisdictions. Next come the fire-fighters whose duties are likely to be onerous, as the danger from incendiary bombs is now greater than ever. It is stated that these missiles have been so perfected that a bomber can carry 2,000 of them and drop them in batches of 20, which would burn with great intensity for ten to fifteen minutes. Fire engines will have to be increased in number and provided with emergency water supplies in case the city waterworks are destroyed. Next in order come the decontaminating squads whose business would be to attend to "gas" cases, and clean up localities infected with poison. It is stated in some quarters that the danger of gas is exaggerated. Mr. Garratt, for example, believes that gas will not be a source of serious menace, as it cannot be employed in sufficient concentration and will be neutralised soon by wind. The radical English writers believe that the Conservative Government purposely overstressed the gas danger in order to enlist popular support to the policy of appeasement, in preference to that of firm resistance. While the British Government was flooding the country with cheap booklets on such terrifying subjects as *Decontamination Materials, The Protection of Food Stuffs against Gas* and *Personal Protection against Gas*, a volume of opinion all over the kingdom was growing that the latest scientific devices as well as contemporary military evidence showed that the gas danger for the *civilian* population was interestedly exaggerated. Dr. Freeth, chief chemist of the I. C. C., declared that a man would be practically safe if he "got into his bath, smoked a pipe, and laughed." Colonel Gibson, an U. S. Army chemist, estimated that to wipe out

even a small city (about the size of Karachi) 80 tons of phosgene would be required and that even a slight zephyr would blow the gas away. Professor Lanetti of the Columbia University stated that only very small concentrated areas of London or New York would be gassed. Lastly may be quoted the opinion of Liddell Hart, who, in his book *Europe in Arms*, rated mustard gas only as a "first class nuisance" for the civilians. Incendiary bombs are a different pair of shoes altogether, and the Japanese indignation against the Soviet is in no small measure due to the persistent and ill-concealed location of a large Red bombing fleet at Vladivostock, thus menacing the wood-and-paper built cities of Japan. In India it is likely that gas will not be largely used against civilians. For one thing, our coastal cities are warm, sun-lit and breezy, and the deadly miasma will soon disappear. Further our city population is not so concentrated as to justify the large-scale use of gas, which though cheaper than explosives, is uncertain in its effect. But this does not mean that we should not be prepared for this possible danger. As pointed out elsewhere, several million gas masks should be kept ready in some of our big cities for emergent issue to the poor. The rich must be encouraged to buy their equipment, which, after all, is not costly. In the Indian army, the mask used is a service respirator and container (Masks IV and III respectively) which consist of a rubber sheet face-piece covered with khaki, fitted with eye-openings of splinter-proof glass; an aluminium valve-holder connecting the face-piece to the flexible tubing and containing the outlet valve; and lastly the container, which is a tinned iron box weighing 1¼ lbs., and holding the chemicals for purifying contaminated air breathed-in through the in-let valve. This sort of mask is now not issued as an article of general equipment to all Indian troops, although it is stated that a large, but not a sufficient, quantity is kept in reserve. The equipment is not very expensive (costing not more than Rs. 10 each if produced on a large scale), and should be within the reach of all well-to-do civilians. The rich people, who could provide themselves with their own cellars, should make them gas-proof and well-stocked with water-supply and food stuffs along with some sort of air-purifying arrangement.

The question of the "black-out" of exposed areas is a vital one, when considering the problem of aerial defence. In the West most stringent measures are taken to achieve a complete black-out and it is stated that the rehearsals in Germany gave very satisfactory results. In America recently some experiments were made by the High Command in the region of Fort Bragg the lessons of which are interesting. The black-out was more or less defeated by the inability to keep the scattered rural homes in the dark and the moving motor cars, off the road. It was further noticed that although, with the help of high-grade sound-detecting apparatuses and a network of telephone systems, the course of the bombers could be fairly well marked, yet when they were actually over the targets, the twenty-six 800-million-candle-power search-lights were unable to definitely spot the heavy planes. The dull moonlight diffused the rays or the clouds blocked them. At dawn, the most difficult time for the ground gunner, the search-lights were frankly useless. The suppression of diverse ground noises in a city (which are more audible than we imagine) was also a problem which had not been solved. The American High Command regretfully came to the conclusion that with twenty-four anti-aircraft guns (arranged in six batteries) they were barely able to defend only 1½ square miles of territory round Fort Bragg.

There are some interesting facts to be mentioned about aerial attack. Deep red and orange are the colours most noticed from air. Brown and green are least noticeable. In recent colour photographs taken in America from the air it was observed that khaki-clad soldiers, supposedly hidden away in dense shrubs and woods, were clearly seen from the bombers. The worst thing to do in a low-range bombing is to lie down or run, as in both cases the victims are more easily observed. To stand still or to squat will be safer, except that groups of men should immediately disperse and take natural cover. In the presence of high explosives all must plug their ears, as death or permanent deafness is caused by the terrible concussions set up by the bombs, even if one is not hit.

APPENDIX B

SOME NOTES ON THE INDIAN ARMY

From the very earliest times Indians appear to have been a war-like race with large, disciplined, and well-organised armies. From our *Puranas* we learn of the four-fold division of the army into *Ratha* (chariots), *Gaja* (elephants), *Turaga* (cavalry), and *Padaṭi* (infantry). The ancient scientific treatises (*e.g.*, the *Arthasastra* and the *Sukraniti*) elaborately deal with the organisation and training of the fighting forces. The number of troops employed in the Puranic wars, when fifty-six nations of Aryavarta fought with each other, would run into colossal figures if we can rely on the data given in the great epics. That the poets did not greatly exaggerate the figures is borne out by later historical evidence. For example, even Purushottama, a small Punjab chieftain, could bring against Alexander an army of 200 elephants, 6,000 horses, 600 chariots and 30,000 foot-soldiers. The nobility of his time fought from their chariots, which, as the Greek writers point out, were drawn by four horses and carried six men, two carrying bows and arrows, two strong skin-covered man-size bucklers, and two, spears, swords, maces and javelins. The infantry used broad swords and spears, and alternatively, the long bow, which was over five feet high and was planted on the ground and then pulled to the fullest extent by pressure of hand and foot. The Greek historians had a great respect for the Indian archers. Herodotus records how the latter fought valiantly with the Persians at the battle of Platea, "clad in cotton garments and carrying long bows and arrows tipped with iron." Arrian (in his *Indika*) testifies that, "there is nothing which can resist an Indian archer's shot, neither shield, nor breast-plate nor any stronger defence, if such there be." The utility of these powerful auxiliaries was often lost by a stiff observance of the classic rules of war and a delusive reliance on fighting elephants. In the battle of the Hydaspes it would appear that Poros refused to believe that

Alexander would attack him at night in a stealthy manner, which was quite opposed to chivalrous Indian standards according to which an enemy should advance openly in broad daylight after shouting his challenge. The result was a surprise attack by Alexander and a costly defeat, although the Indians conducted themselves in such a manner, that the Greeks lost their appetite for further fight. Alexander in this battle proved, as Babar did 1,800 years later, that the elephants, when wounded or frightened, were more a danger to their own army than that of the opponents.

Chandra Gupta Maurya had a huge standing army, which consisted of 600,000 foot-soldiers, 30,000 horses, 9,000 elephants, and a large number of chariots estimated at 8,000. Each horseman carried two lances and a buckler, and each elephant, besides the mahout, three archers. This vast force (which, with its non-combatants, must have totalled a million men and thousands of animals) was administered by a War Board of 30 members, divided into six committees, four for the Four Arms, the fifth dealing with Transport and Supply, and the sixth being in charge of the Navy. (Cf. Megasthenes, *Fragments.*) That the Mauryan army was very efficient is borne out by the testimony of Plutarch and by the fact that it was able to rout Seleukos, the powerful king of Babylon. Travelling down the stream of time, we find Kanishka sending a large army, "with 70,000 cavalry" across the Himalayas to Turkistan and Tibet, which countries he conquered and laid under tribute. This achievement, (which is comparable to that of Hannibal crossing the Alps with his army and 300 elephants) shows how well organised the transport system must have been, even two thousand years back. Samudra Gupta must have had a large standing army (though its dimensions are not recorded), which enabled him to make a triumphal march of conquest throughout Bharatadeśa. We have more details about Sri Harsha's forces, which, according to Hieun Tsang consisted of a million infantry, 100,000 cavalry, and no less than 60,000 war elephants. By his time (7th century A.D.) the chariots had been apparently discarded. The above figures show that Harshavardhana must have probably had the world's strongest standing

army of his age. After Harsha, decline set in on India's military prowess. The Sultan of Ghazni found no cohesive armies opposing him, thanks to serious internal dissensions, which have always been the bane of India. Even where numbers were on the side of the Hindus, martial fervour appeared to have abated and given place to vacillation and lack of the will to fight and die, rather than to surrender or fly. The Ghaznavi and the Ghori invasions are generally a tale of shame and humiliation for the Hindus, whose riches, soft life and disunity were but added baits to the rapacious free-booters from the north, who consoled themselves for their many atrocities by the fact that the victims were all infidels, "fit only to be sent to Hell." The dependence on elephants and the disregard of light mobile cavalry was usually the ruin of the Indians, amongst whom the rigidity of the caste system restricted the knowledge of arms to a particular class of men, whose numbers gradually dwindled and who commanded inadequate fealty from the mass of the people.

The early Delhi Sultans had large paid armies which were remunerated in cash. For example, the foot-soldier in Allauddin Khilji's time received 234 *tankas* a year, and a horse-man 322 *tankas*. But by the reign of Ferozeshah Tuglak, the *jagir* system had been introduced, by which the army was raised by feudal levies supplied by dignitaries in return for grants of land. That this system was not effective is shown by the much smaller number of troops (40,000 foot, 10,000 horses, and 125 elephants) which were sent against Tamer Lane when he attacked and sacked Delhi. This deterioration is probably due to the fact that the Hindus could not be trusted and had to be kept out of the army, while the Islamites were not sufficiently numerous and organised to provide a large force of their own. In the South, however, where there were no racial or religious divisions, the comparatively small Rajas of Vizianagar were able to collect enormous forces. Nenez, a foreign traveller, records that Krishna Deva Raja had a force of nearly 8,00,000 including 33,000 cavalry and 600 elephants. But the quality of the mercenaries was uncertain, owing to the lack of patriotism, of sustained courage and of an appreciation of new methods or mechanism of warfare. The

improved weapons of the west, cannon and matchlocks were mostly unknown to the Indians. The battle of Panipat was won by Babar largely by the clever use of his 700 pieces of artillery and of his detachment of musket-men, who hit the enemy elephants with naptha balls and turned these monsters against their own keepers.

Akbar abolished the *jagir* system of army recruitment and introduced 33 ranks of Mansabdars ranging from 20 horses to 7,000. These Mansabdars received cash pay from the treasury for their quota of cavalry, but not infrequently false mustering and bribery reduced the quota to a large fiction. It is recorded by Badaoni that Laftullah Khan, who drew allowances for 7,000 horse-men, kept not even seven asses, let alone equine mounts and riders! Infantry was neglected but a good park of artillery was maintained under the control of Rumis and Farangis (*i.e.*, Turkish and Portuguese sailors and adventurers). The guns themselves were at first imported from the West, but, later on, good types were cast in South India and the Deccan. Thanks to the Moghuls' benevolent religious policy, the size of the army was made impressive through large Rajput recruitments. Monserrate estimates that in the attack on Kabul, Akbar used no less than 5,000 elephants, 45,000 horses, "and countless foot-soldiers," possibly about three lakhs. In the time of Shah Jehan, and to larger extent under Aurangzeb, the Imperial Army became a great, undisciplined rabble, incapable of swift action or brilliant adventure. Shivaji's lightning success amply demonstrated the degeneration which afflicted the Moghul forces. Shivaji himself organised his army with foresight and determination. He erected about 300 forts in his domain and put them in charge of garrisons. Besides these, he had a standing army of 30,000 cavalry, and 100,000 infantry and about 1,200 elephants. His artillery was not large (about 80 pieces) but he had 200 men-of-war to fight the ambitious *mleccha* foreigners from Europe. He was probably the first ruler to adopt the *Silledar* system of making the troops find their own mounts and accoutrements. Discipline was excellent, as he issued strict orders to the effect that "No woman or dancing girls should be permitted. Women and children of the enemy should be protected. Any one disobeying these rules would be put to

death." With the break-up of the Moghul Empire and with Shivaji's premature death, India's military strength underwent a radical decline. Petty chiefs and rajas, marauding captains and adventurers, ruled the country and by their endless internecine strife paved the way for foreign conquest.

The British Sepoy army in India had very humble beginnings. The *peons*, as these Indian soldiers were called at first, used to guard the small English factories whose European garrisons were at first very modest (not exceeding 100 ordinarily for each station). The French under Dumas (and not Dupleix, as is usually stated) made the epochal discovery that the Indians, if properly trained, made excellent fighting stuff. Considerable numbers were accordingly recruited by them and used in their local wars. The threat from the nascent French power made a larger force necessary for the English and Major Stringer Lawrence ("the Father of the Indian Army") raised considerable levies, which ultimately became the nucleus of India's army. Clive followed him in this task and ably used the knowledge gained from the French. In the siege of Arcot it may be remembered how the 300 sepoys were so loyal to the British force of 200, that when they ran very short of food, they willingly took the watery gruel for several days and gave the solid rice to the British troops. In the battle of Plassey a large number of sepoys from South India fought on the side of the British, with distinction.

After the conquest of Bengal the Sepoy army was organised in 7 battalions of 1,000 men each. Strangely enough these battalions were at first commanded by Indian officers (who alone could extract full allegiance), but certain British subalterns and sergeants were placed under them for instructional purposes. The army was successively reorganised in 1767, 1785 and 1796, on a regional basis, and finally the command of battalions was taken away from Indians. European officering was always a great problem. Promotion from the ranks was "greatly objectionable" in the words of Clive, "as the officers were drunken and dissolute." Mixed blood was no bar to a commission and many well-known names in British Indian history are of cross-bred origin. Later on, however, every would-be officer had to sign a certificate that his mother was

not of "pure Indian blood", thus allowing ingress to descendants of half-castes. (Cf. Dodwell, *Sepoy Recruitment.*) Many of the European officers were foreign adventurers, deserters, and ex-convicts. The original Madras sepoy troops were mostly Moplahs and Nairs, but subsequently Tamils (who were rated high for discipline and steadiness) were recruited in large numbers. The Carnatic Telingas were, however, considered inferior, and their intake was restricted. About the quality of the earlier sepoy, opinion varied, but Count de Lally paid them a great tribute when he said that "they would even venture to attack white troops." The Bengal army was initially made up of Brahmins and Rajputs, described as a brave and war-like people. (Cf. Broome, *Bengal Army.*) The quality of the British officers generally was, however, considered poor as they were always in debt and addicted to drink. Concubinage was universal; and the "native house-keeper" (usually of very low caste) was an established institution. In Bengal alone, it is stated, there were 4,000 of them in 1800 A.D. The rest of India was also strewn about with cantonments seething with illegitimate offsprings of these irregular unions, which were not only recognised by fellow officers but also by the Court of Directors, who felt that this arrangement was conducive to economy, as it allayed a demand for higher pay from the soldiers.

A brief resumé of the mutinies which afflicted the Indian Army may be attempted here as showing the methodology of English military rule. In the European section, disaffection was chronic and frequently resulted in open revolt and acts of violence against the Company. In 1674 and 1679 the English force in Bombay mutinied against a reduction in pay and seized the Fort. In 1764 the Bengal European Regiment declared its independence of the Company, but the revolt was short-lived thanks to Clive's prompt action. After his departure all the British officers in the Bengal Army broke into revolt, consequent on a reduction in field allowance, but were finally brought round by pressure mixed with some concessions. In 1809 there occurred a large-scale "White mutiny" in Madras, on grounds of supersession and inadequate share of loot. This mutiny spread *inter alia,* to Gooty, Secunderabad, Bellary, Trichinopoly, Dindigal, and Serangapatam. The in-

surgents seized the Company's treasure, butchered the Indian guards, and attempted to destroy civil government. The rising was quelled only when the King's troops were called from Ceylon and the Company's forces from Bengal. The white mutineers were leniently dealt with, six officers being pensioned off and fourteen dismissed from service. In fact, in all these mutinies, not a single Britisher was punished either by death or imprisonment, howsoever grave his offence might have been. The "double standard" in meting out disciplinary and even judicial action to Europeans in India to-day has apparently an ancient history behind it.

Contrast, then, the treatment accorded to the native armies, when trouble broke out among them, often for very venial reasons. The earliest rising occurred in the Bengal native army in 1765, owing to discontent with the unjust distribution of prize-money and with a new code of military regulations, which imposed a harder service without a higher pay. The mutiny was repressed with great severity, all the leaders being blown from the mouths of the guns in the presence of their comrades. In 1806 a regiment of Madras Indians at Vellore (largely Moplahs and Tamils) was ordered to wear *shakos* instead of turbans, to shave off their beards, and to discard their caste-marks and ear-rings. This was considered as an attack on religion and the men rose in revolt. Col. Gillespie arrived soon with the Madras army, killed 400 sepoys in the fight and butchered the rest in cold blood. In 1824, when the first Burmese War broke out, the Bengal infantry (which had not enlisted for general service and which was ordered to Rangoon) refused to cross the *kala-pani.* It was thereupon ordered to march overland to Arakhan, providing its own transport for the thousand-mile march over rivers, forests and mountains. Since the means of transport were naturally either unobtainable or prohibitively costly, the men petitioned to be exempted. When this was disregarded, the men disobeyed the order. They were then, in the cold words of the official records, "ordered on parade and shot down and sabred" by the thousand. (Cf. *Imperial Gazeteer,* Vol. IV.) For ruthless frightfulness, this mass murder is hard to beat even in the bloody history of John Company.

The story of the great struggle of 1857 is too well-known to

require detailed description. At that time the ratio of European to Indian troops was 40,000 to 230,000, many of the latter consisting of Brahmins and Rajputs, drawn especially from Bengal, Oudh, Rohilkhand and Central India. The high caste of these men excited jealousy and spite among other sepoys, notably the Jats and the Sikhs, who were keen on curbing the *Pandeys*, as the high-caste men were known. The failure of the 1857 Mutiny was due to lack of good weapons and artillery among the sepoys, the support given to the British Raj by the Punjabis, the Sikhs, the Gurkhas, the Marathas of Gwalior and Indore, and the Rajput states, and to the faithfulness of the armies of South India and the Deccan. Between the various groups of revolters there was lack of concert and common objective; diversities of race, rank, status, and most of all, religion, made it impossible for them to combine. There was no rallying standard of loyalty, as the nebulous Delhi Emperor was obnoxious to many, and no substitute such as the love of the country had yet been born among the mercenaries.

The immediate result of the Mutiny was a distrust of high-caste recruitment and an increasing dependence on Gurkhas, Sikhs, Pathans and the Punjabi Mussalmans who fitted well with their status of hirelings, and were willing to sell unquestioned obedience for cash. A dislike of the Hindus from Bengal, Bombay or South India became an obsession with the Army Command. The Indian troops were more rigorously excluded from the artillery and from contact with public opinion. As far as possible, the troops were kept away from their native districts. The Gurkhas, for example, were posted to Bengal or the Punjab; the Sikhs and Garhwalis to the Frontier; the Pathans to Rajaputana and the Deccan; and the Baluchis to South India. The system of mixing the class composition of the troops in each battalion was adopted to prevent an undesirable type of *esprit de corps* among them. The proportion of European troops was increased to 1/4th of the total, and, later on, the territorial battalions, composed mostly of anti-national elements, was formed as a second line of defence, for British Imperialism. The Army Officers were also forbidden to preach Christianity to the men, as they often used to do prior to 1857. The railway construction was proceeded with apace and

secret instructions were issued for the mobilisation and transport of troops to the disaffected areas.

The present organisation of the Indian Army is based on the principle of Imperial responsibility. The Secretary of State for India is supposed to be the special custodian (subject to the control of the War Office) of the defence of India. The Governor-General-in Council is the ultimate head of the Indian Army, but if the Commander-in-Chief is a strong man, he can assert his own personality in opposition even to that of the Governor-General (as the Kitchener-Curzon episode proved). Under the Government of India Act of 1935, Defence is a reserved subject administered by the Governor-General in his discretion. The expenditure on the Army, Navy and the Air-force will be non-votable, although the legislature will have a right of discussion and interpellation.

The Commander-in-Chief is the departmental head of all the fighting forces, including the Navy and the Air force. He is assisted by a Military Council composed of himself, the Chief of Staff, the Adjutant-General, (who deals with all staff and recruitment problems), the Quartermaster-General, (who looks after supplies and transports), the Master-General of Ordnance, (who deals with all mechanical equipment), the Air Officer Commanding, the Secretary to Government in the Military Department, and the Military Financial Adviser. The Council is a purely advisory body and has no collective responsibility and meets only when summoned by the Commander-in-Chief.

The territorial division of the Indian Army is in four Commands, the Northern one with headquarters at Murree, the Eastern, at Naini Tal, the Western, at Quetta, and the Southern, at Poona. The four Commands between them constitute 13 first and second class Districts, and four Independent Brigades.

The Army is technically divided into three categories, *viz.*,

(*a*) Covering Troops, whose duty is to keep watch on the frontiers and to facilitate mobilisation in case of need;

(*b*) The Field Army, which is the main spear-head of India's offence and defence.

(c) The internal security troops, whose duties are merely ancillary and who are mainly intended for keeping Indians "law-abiding and loyal to Britain."

India's defences are split up into two sections, the British and the Indian.

(A) The British forces are part of England's Army, detailed for temporary Indian service by three-yearly turns. The composition is 5 British cavalry regiments (which have all been recently mechanised, partially at the cost of the British Ex-chequer) and 48 infantry battalions. Four of these battalions have been recently transferred to Egypt and Palestine, and War Minister Mr. Hore Belisha recently stated in the Commons, that further reductions were possible. Till 1929 the British Infantry forces were entirely non-Indian, except, of course, for servants and camp followers. In 1921 the Independent Machine-gun Corps was abolished and a unit of 8 machine-guns was supplied to each British battalion. In 1929 the Machine-gun (Vickers-Armstrong or Berthier) unit was modelled into a company consisting of Headquarters and 3 platoons. One of these platoons is now Indian, to the extent of 1 N.C.O. and 42 other ranks.

The Royal Artillery is predominantly a British affair. Originally Indians were religiously excluded from it and even now their entry into this special European preserve is rigidly controlled. While Indians are utilized only as drivers and as mechanics in the Royal Horse, the Field, and the Medium batteries, they are allowed to work, in a minor degree, as gunners also in the Mountain and the Heavy batteries. It cannot, however, be said that there are in India to-day any Indians fully qualified in the use of cannon. The strength of the various units is as under:—

Royal Horse ...	4 batteries of six 13-pounders each.
Field (Non-mechanised)	5 Upper Brigades and 4 Lower Brigades. Each Upper Brigade has two batteries of six 18-pounders and 2 batteries of six 4·5″ howitzers. Each Lower Brigade consists of 2 batteries of four 18-pounders and 2 batteries of four 4·5″ howitzers.

Field (mechanised)	2 batteries of four 18-pounders and two batteries of howitzers.
,, (reinforcement)	One battery of six 18-pound guns and 4 howitzers.
Mountain Brigade	Six Brigades (with 2/3 Indian personnel) each consisting of six batteries, the equipment being mainly 3·7″ howitzers. These are mainly located near our northern and western frontiers.
Medium Brigades ...	Two Brigades of 3 batteries each, the latter being equipped with either 6″ howitzers or 60-pounder guns.
Heavy Brigade ...	Two batteries, stationed at Karachi and Bombay respectively. These are anti-naval guns for protecting our ports. In point of size, however, they are not comparable to the XII or XVI inch guns with which the battleships are equipped now.
Anti-aircraft ...	One battery located at Bombay equipped with eight 3″ guns. It would appear that another battery has been installed at Karachi but details are not available. These 3″ guns are now more or less obsolete as their range is insufficient against modern aircraft.
Indian artillery ...	This consists of one regiment of two batteries, each of the latter being made up of 18-pounder guns and 4·5″ howitzers. The training of Indian personnel for this and other Brigades in imparted at the artillery schools, at Muttra and Ambala. Most of the officers of this section are, however, still British.

The Military Engineering Department consists of Sappers and Miners and the M. E. S. proper. The superior officers of the two

branches are almost entirely European, although there is absolutely no reason why the M. E. S., at any rate, should not be wholly Indianised. If this be done the saving to the country will be very considerable.

The Royal Air-force is also under the Commander-in-Chief. Its subordinate formations are as below: —

1. The Group Command	Two wing stations or 4 squadrons totalling 48 machines stationed at Risalpur and Kohat respectively.
2. The Wing Command	There is only one such, stationed at Quetta, with two squadrons.
3. Wing Station Commands ...	There are two of these located at Peshawar and Risalpur respectively, each consisting of two squadrons.
4. The Squadrons ...	There are eight of these, distributed mainly along the North-West Frontier. The number of machines in a squadron varies with the type of machine but usually it is 12, *i.e.*, three for each of the four flights. The types now in vogue are the Bristol Fighters and Wapitis, both of them much inferior to the up-to-date European models. Wellesleys and Spitfires are, however, contemplated.

Besides the above combatant units, there are an Air force Depot at Karachi, an Air Force Park (for retail distribution of materials) at Lahore and a Heavy Transport Flight, (which did some good work during the troublous rule of Bacha-i-Sako at Kabul). The total strength of the Royal Air force is approximately as under:—

Officers	= 260	(All Europeans).
Air-men	= 1887	

Indian other ranks and followers	=	945	(Mostly servants and under-mechanics).
Civilians	=	530	(Many Europeans even here).
Royal Air Force Medical Corps	=		(11 Officers and 27 airmen, all Europeans).

Till 1932 there were no Indian airmen. In this year six cadets were recruited for training at Cranwell and these were eventually appointed as pilot officers. There have been some resignations but the number has slightly increased since, the idea being that an Indian Air Force manned essentially by the sons of the soil should be ultimately constituted. It is obvious, however, that at the present rate of progress, it will probably take centuries before India is able to produce pilots equal in number to those of the western powers. The present Indian strength (less than 15) compares unfavourably even with countries like Egypt and Afghanistan, where the number of qualified military pilots is many times the Indian figure.

(B) *The Indian Army* proper consists of both Cavalry (21 regiments) and Infantry (125 battalions). The normal strength of a regiment is about 520 officers and men, and of an Infantry battalions 800 officers and men; and the term of service is 7 years under the colours and 8 years in the reserve. Of the Infantry battalions, no less than 20 are composed of Gurkhas, and 7 of Sappers and Miners, whose number was increasd in 1932 by the abolition of the Pioneer Battalions. To feed this army, a small and totally insufficient number of Reserves (34,000) is maintained, the theory being that this number will bring the Army to strength on mobilisation and also keep it up for 8 months after the fight starts, thus ignoring the huge wastage (25% in a month) which occurs in modern wars.[1] The Indian army, as it is at present, will not

[1] During the Great War, the Indian Army was increased from 194,000, to 985,000, of whom over 550,000 were sent overseas. The casualties abroad are stated to have been 106,000, including 36,000 dead; but it is generally believed that the actual loss in personnel was greater. In a future three-dimensional war, the casualties are likely to be much larger.

be able to stand up even for a week against highly mechanised troops like those of Germany, Italy or Japan. It is doubtful if it will equal in quality or strength even the forces of third-rate countries. For all mechanical equipment and generalship it has to depend on the foreign garrison, whose withdrawal will throw India's defence into utter confusion and peril. It may be remembered in this connection how the sudden withdrawal of German officers from China seriously affected the defences of that country and this should be an eye-opener to us.

The composition of the Indian Army has undergone rapid transformations from time to time. In the early days of John Company, as already mentioned, the forces were recruited principally from South India, Bengal and the Deccan. These soldiers, acquitted themselves very well, and the South, in a sense, helped the English to conquer the North. In the fight against the Mahrattas, and later against the Sikhs, the troops from Bengal, Oudh and the Deccan were used with notable success. At the time of the Mutiny a large part of the troops were either high-caste Hindus or Rajputs and Afghan Moslems; but the defection of the Moslems of Oudh and Delhi and the excessive caste scruples and the political awakening of the Hindus gave a shock to the authorities who started about looking for other material. The loyalty of the Sikhs, the Gurkhas, and the South-Indian troops enabled the British to win, but the latter were gradually eliminated as they were considered to be too intellectual and understanding for that sort of unquestioned obedience which an alien bureaucracy demanded. Gradually reliance was placed more and more on the Punjabis, the Gurkhas (whose mettle was tested in the Nepalese Wars), the Dogras, the Jats, the Pathans and the Sikhs. The names of the old Southern regiment were changed into north-Indian designations.[2] A theory of martial and non-martial races was evolved, under which all classes from the intellectually more advanced parts of the country, were excluded from the army, in preference to recruits from the less settled parts of the sub-continent where edu-

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[2] For example, the Muthu-Nayak-i-phaltan, which was raised in Trichinopoly in 1759, ultimately became the Ist Battalion of the Ist Punjab Regiment.

cation, historical tradition and national spirit were sufficiently lacking. The Great War, however, is supposed to have revealed the fighting qualities of neglected sections like the Mahrattas and the Bengalees and there is talk of a new orientation of recruitment policy, whose possibilities have been frequently ventilated in the press, on the platform and in the legislatures.

The present recruitment to the Indian army is mainly confined to the following classes, apart from the Gurkhas:—

(1) Punjabi Mussalmans.

(2) Pathans.

(3) Sikhs.

(4) Rajputs of Rajputana and Oudh.

(5) Garhwalis.

(6) Jats and Dogras.

(7) Mahrattas of the Konkan and the Deccan.

(1) The Punjabi Mussalmans constitute nearly 30% of the Indian army, especially predominating in the cavalry in which they excel. They are mixed up with most of the other regiments except the Gurkhas.

(2) The Pathans and the Baluchis number over 10% of the total forces. Along with the Rajputana and the Punjabi Moslems they constitute over 50% of the Indian army. This means that 80 million Moslems in India contribute more than one half of our defence forces, and 300 million Hindus and Sikhs, the other half. The reasons for this pro-Muhammadan policy of the Government (which has its counter-part in the civil administration also) are obvious.

(3) The Sikhs are recruited in large numbers both to the infantry and the cavalry and are acknowledgedly good fighters. They form about 10% of the army at present. In the Mutiny, their leaders, *viz.*, the Rajahs of Nabha, Patiala and Kapurthala lent valuable support to the British. The Sikhs are reported to have aided and abetted the Europeans in many acts of cruelty and

vandalism inflicted in revenge on the people of U.P., Bihar and Bengal at the later stages of the Mutiny. After the Jallianwalla Bag Tragedy and the Akali Dal movement, the glowing loyalty of the Khalsa for the British *ma-baps* has latterly died down, with the result that the High Command is said to be thinking of reducing the number of Sikhs in the Army.

(4) The ancient fighting caste of the Rajputs (both Moslem and Hindu) were the backbone of John Company's northern army before 1857 but subsequent to this date their incidence has been reduced. Their caste prejudices do not interfere with their efficiency and they are ranked with the world's best fighting troops even to-day.

(5) The Garhwalis, the Jats, the Dogras and the Mahrattas constitute the rest of the indigenous Army. Their reputation is also very high, as they fought well at Flanders and in Mesopotamia and won many laurels. The pluck displayed by the Mahrattas in the last war especially has revived the hope of increasing their numbers in the Indian Army.

(6) The Sappers and Miners are mostly drawn from South India, the Deccan and the Punjab, and are admitted to be exceptionally efficient in their difficult and dangerous profession. The Indian Signal Corps is organised on the same lines as the Sappers and Miners, the superior officers being all Europeans. A signal training centre is located at Jubbulpore, for the care of the Indian personnel.

The Royal Tank Corps was first formed in 1921 when six Armoured Car companies arrived in India. The present organisation consists of 5 Light Tank companies and 5 Armoured Car companies. Each L. T. Company is equipped with 25 Carden-Lloyd Light Tanks, entirely manned by Europeans. Each A. C. Company is provided with 16 armoured cars, of various types, and staffed in the main by either Europeans or Anglo-Indians, who alone, it would appear, could be trusted to handle them.

The Auxiliary Force is based on legislation enacted in 1920 which restricts membership in the Force to European British subjects, who are generally liable for compulsory training and service. The training is graduated according to age, and since

service is local, the training is adjusted to this factor. The Auxiliary Force consists of all branches of the Army (Cavalry, Infantry, Artillery, Engineering, etc.) and is liable to be called for duty in an emergency. Its genesis is essentially to be found in the need for keeping Indians under control, in case political or industrial trouble breaks out, to the detriment of the ruling caste.

The Indian Territorial Force is the native counterpart of the Auxiliary Force and was created as a sop to the insistent demand for Indianisation. This Force is supposed to offer opportunities for training to men belonging to the military castes, and to be a second line of India's defence. In practice, however, the Force is of a very mixed and non-descript character and not very popular, especially since service overseas is obligatory, except for the University Corps. It consists at present of 3 main categories, *viz.*, Provincial Battalions, Urban Units and the University Training Corps. These are trained all the year round, by weekly drills and short annual camps, under qualified British or Indian instructors. There are now 18 Provincial Battalions and 4 Urban Units and a few U. T. C. Battalions. The training given is not of a high order and not comparable to that even in the 'C' Class State Forces.

The Indian State Forces (formerly designated, very suggestively, as Imperial Service Troops) are raised by Indian States at their own expense and under their control. They are, however, inspected by British Military Advisers and are expected to be offered for British use in times of necessity according to a convention which makes such assistance reciprocal. The State Forces fall into three categories, *viz.*:—

Class A.—Organised, equipped and trained on Indian Army lines and with an equal record of efficiency and good work.

Class B.—Organised and equipped in a slightly inferior degree.

Class C.—Consisting of militia formations of much lower standard of equipment and training.

The total authorised strength of the I. S. F. is roughly 50,000, composed of Artillery, Cavalry, Infantry, Camel Corps, Sappers and Miners and Transports. It may be noted that the officers and the Commanders of all the Indian State Forces are Indians, usually drawing a pay of about one-third to one-half of their British counterparts. If Indians can successfully command the 'A' class troops in the States (which are in no way inferior to the British Indian Army and which did excellent service in the last War), there is no good reason why the Indian Army should not be wholly Indianised.

Other Branches of the Army.—Besides the above fighting forces, there are various auxiliary branches of the Army which are mostly filled with Europeans in positions of command and control. The most important of these are the Medical Services, which are divided into two groups, *viz.*, the Royal Army Medical Corps, which belongs to the English Army and is merely temporarily sent to India; and the Indian Medical Service which is only partly Indian in composition. Indian opinion is strong that the Army Medical Branch should be speedily and completely Indianised and it is understood that all Provincial Governments have strongly protested against the continued I. M. S. supremacy in the provincial medical departments. Even among the subordinate medical officers (*e.g.*, the Assistant Surgeons) the bulk of the posts is reserved for persons of "European extraction." The worst extravagance, of course, is to be found in the Nursing Services, which are almost entirely monopolised by European and Anglo-Indian personnel falling under the following categories:—

(*a*) Queen Alexandra's Imperial Nursing Service.

(*b*) Queen Alexandra's Military Nursing Service.

(*c*) Indian Military Nursing Service.

The high rate of pay given to the European nursing staff is well-known, and a process of speedy Indianisation appears to be indicated in the interests of economy, necessary training being imparted to Indian women for the purpose. The army hospitals are also staffed on an extravagant scale (especially on the Royal

Army side) and large-scale economies are stated to be possible in them.[3]

The Army Service Corps is the successor of the old Commissariat Department, and the defunct Supply and Transport Corps. It is divided into the R. A. S. C. and the I. A. S. C. These two Service Corps are further divided into three branches, *viz.*, Supply, Animal Transport, and Mechanical Transport, and the total strength is about 18,000 officers and men, the former being of course entirely European in the superior grades and mostly drawn from the Royal Army on the alleged ground that facilities for training in India are deficient. The total number of animals is: mules 13,000 and camels 4,000, *plus* a few ponies and bullocks. In the Mechanical Transport Corps, there is the following equipment consisting of over 2,000 vehicles and 100 motor cycles:—

(*a*) Field units: 11 M. T. Companies for active duty, 5 M. T. Companies for ambulance work, and 2 M. T. Companies for repair work.

(*b*) Maintenance units: consisting of Heavy Repair shops, Stores and Reserve Depots and an Experimental Section.

The Ordnance Services are intended to supply all arms and ammunition as well as clothing and general stores for the Indian Army. As pointed out elsewhere in this book, although raw materials and labour are plentiful in India, they are not taken full advantage of, and large and expensive imports are the order of the day. The experiments made by the Army Command are not always happy and many have proved to be costly failures. The

[3] The cost of nursing staff in the Army is as under (1937, figures) :—

European Hospitals	Rs. 9½ lakhs.
Indian Hospitals	Rs. 1¾ lakhs.

Total pay of Medical Staff for the European and Indian Military Hospitals is Rs. 75 lakhs and Rs. 45½ lakhs respectively.

As pointed out already, the ratio of Europeans to Indians in India's army is 1 :3.

Lahore abattoir scheme which resulted in a loss of nearly Rs. 50 lakhs to the taxpayer may be mentioned as a case in point.

The Army Remount Department is intended to cater for the animal supply to the Army, for census and categorisation of transport animals, and for breeding operations of a limited character. In spite of vast opportunities, the purchase of 'walers' from Australia has continued for a long time. thus costing the country an enormous sum in the aggregate. If only proper breeding operations had been carried out in our own country, the economic benefit to India would have been appreciable.[4]

Miscellaneous Defence Departments, consist of Veterinary, Farms, Educational units, whose officering is largely a European monopoly. There are, for example, over 60 European officers and 165 other ranks in the Army Educational units besides numerous British civilian personnel.

Besides the regular troops described above, there are some units of civil militia, officered from the regular army, and stationed in the N. W. Frontier. These are the Kurram Militia, Tochi Scouts, Zhob Militia, Mekran Levy Corps, etc.

Indianisation is essentially a problem affecting the superior officers, since the Viceroy's commissioned officers (*i.e.,* non-commissioned officers) are already all Indians in the Indian Army. The British officers for the Indian army (whose total number in all the branches is approximately 6,600) are obtained either (occasionally) by transfer from the British units or (more often) from the passed Cadets of the Royal Military Colleges at Sandhurst, Woolwich, etc. Some officers are also recruited from the University candidates. Prior to the Great War, Indians were not eligible for the King's Commission. Subsequent to this cataclysm, a limited number of Indians were admitted to this concession, recruitment being arranged through two sources, *viz.,* the promotion of a few selected Indian non-commissioned officers of sufficient education, smartness, and experience; and the training up of some young Indians in the English Military colleges of Sandhurst and Woolwich subsequent to an examination held twice a year in

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[4] Last year, horses to the value of 19 lakhs were purchased abroad.

India. In the beginning 10 vacancies at Sandhurst and 3 at Woolwich were reserved for Indians. Subsequently an Indian Military College ("Indian Sandhurst") was established as a preliminary training institution. This college has accommodation for a maximum of 70 boys, with a period of training extending over 6 years. Thus the annual output will not be much in excess of 10 cadets, who, after a further training in England, will get commissioned into the Indian army. At this rate of recruitment, it would take about 200 years to Indianise even 50% of the Army.[5]

In 1923, it was given out that 7 units of the Indian army would be completely Indianised ultimately (out of a total of 148 units). In 1932, however, as a placative gesture it was announced that a Division of all Arms and a Cavalry Brigade (about 15 units in all) would be eventually Indianised, and that an Indian Artillery unit would be formed. To facilitate the enforcement of this programme an Indian Military Academy was opened at Dehra Dun in October 1932, and the students passing out of this institution got their first commissions in 1935. Indian opinion has been unanimous to the effect that the pace and method of Indianisation have been altogether unsatisfactory. Even to Indianise one infantry Division and a Cavalry Brigade (about a tenth of our fighting forces) completely would take about a generation. Enough has been said elsewhere about the extreme urgency for a complete Indianisation of our army. Even the Chinese, who in many respects are more backward than we are, possess a fully nationalised army, and this accounts for the rather prolonged (though ill-co-ordinated) resistance put up by the Koumintang.

The Sandhurst Committee of 1926 (the Skeen Committee) made certain useful recommendations which have been hitherto generally ignored by the Central Government. The Defence Secretary, however, announced recently that an alternative "revolutionary scheme" was under examination. The Government, who have not been pleased to take the public into their confidence, have now constituted an Enquiry Committee under Lord Chatfield

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[5] At the end of 1937, the total numbers of Indian and European officers were 150 and 6,650 respectively. Of the 150, only 70 were in the Combatant Forces.

with a minority of elected representatives, and with somewhat complicated terms of reference which may imply a deceleration of Indianisation. The Chatfield Committee is starting under unfavourable auspices and it is more than probable that its recommendations, while completely missing a golden opportunity to do the correct thing by India (and, incidentally, by England also) will also suffer from the insuperable handicap of an *ab-initio* hostile public opinion. It is perhaps not too much to hope that better counsels may still prevail with the powers-that-be, so that the door may be kept open for a co-operative effort towards a military rehabilitation of India in the common interests of both England and India.

Defence Expenditure.—The gross expenditure on India's defences exceeds Rs. 50 crores. Of this amount, about Rs. 40 crores are spent in India and the balance in England. Of the English charges the following are the more important:—

TABLE I

Non-Indian Defence Charges (1937)
(in Rs. lakhs)

1.	Fighting services ...	295	(payments to the British Exchequer).
2.	Administration & H. Q. ...	52	
3.	Stores & Manufacture ...	78	
4.	Transportation, etc. ...	94	
5.	Pension and other non-effective charges ...	455	
6.	Royal Air Force and Royal Indian Navy ...	100	

A sore point with the Indians is the "Capitation" payments made by India, which are intended to cover the cost of training the British garrison kept in India for Imperial purposes. A Tribunal appointed in 1932 investigated the equity of these payments as well as the merits of India's counter-claims. Originally the capitation charge was fixed at £10 for each soldier sent to India. In 1870 it

was reduced to £7½. In 1907 it was increased to £11-8-0 *per capita*, and in 1920 to the stupendous sum of £28-10-0! The Capitation Tribunal finally came to the conclusion that the annual payment should be fixed at £1½ millions or Rs. 2 crores a year. The doubtful justice of this payment (considering the *raison d'être* of the British garrison in India) has rankled deep in the minds of all thinking Indians. At a modest computation, India has paid during the last 100 years, a sum of over Rs. 500 crores to Britain (the annual payments capitalised at 5%) as the cost of training the British garrison for its primary duty of keeping India under control.[6]

India's Naval Defence:

India's main protection from naval attack is the British Navy, a section of which, known as the East Indies Squadron, has been kept in Indian waters since 1903. The strength of the latter was improved in 1913; but the *Emden* raids showed how inadequate it was for its purpose. The present composition is 4 cruisers (from 7,000 to 10,000 tons each) and 4 gun-boats. India used to contribute £100,000 every year to the British Admiralty for the upkeep of this fleet but this payment has been waived since last year, in consideration of a proposal to build 4 destroyers for the Indian Navy at a cost of about Rs. 50 lakhs.

Besides the East Indies Squadron mentioned above, there is what is known as the Royal Indian Navy (formerly called Royal Indian Marine). During the War, this unit consisted of a Depot ship, 4 sloops and some patrol vessels mainly intended for peacetime work. The Esher Committee which was appointed after the War (1920) recommended that the Marine should be made into a combatant unit and this suggestion was confirmed by the Rawlinson Committee in 1925, which suggested that an Indian Navy consisting of a Depot ship, 4 sloops, 2 patrol vessels, 4 mine-sweepers, and 2 survey-ships should be formed immediately. This suggestion, however, remained in abeyance (largely

[6] Recently the British Government undertook to pay a contribution of £1½ million towards the mechanisation of the Indian army.

owing to the Central Assembly's distrust of the bona-fides of the Scheme), till 1934, when an Act was passed inaugurating the Indian Navy on the above strength. At present there are 132 officers and 39 non-commissioned officers in the Royal Indian Navy of whom it would appear that not one is an Indian. This puny Naval Arm will be quite an inadequate protection to India, as none of the sloops is over 2000 tons, and as the whole fleet can be soon destroyed by a single enemy cruiser. Of course, there is the East Indies Squadron, and the Far Eastern Fleet at Singapore and Trincomalee, but, if Japan is against us, the whole of Britain's Naval forces in Eastern Asia will have to be mobilised against her. This will give Italy a somewhat freer hand in the Mediterranean and the Near East. If the Suez Canal is in any way damaged, and part of the Italian fleet is in the Red Sea, the naval danger to India will be very great indeed.[7]

[7] The Suez Canal is controlled by a Company with 19 Frenchmen, 10 Englishmen, 2 Egyptians, and 1 Dutchman, as its directors. The English Government owns 44% of the shares (for which it paid £4 millions) and the rest are owned by Frenchmen privately. The present market value of the concern is £120 millions; the English Government now receives annually about 80% dividend on its investment. This large earning of the Company (much of which is derived from Italian shipping) accounts for the Italian demand for a revision in the Canal dues and for a share in the management. The absolute neutrality of the Company is guaranteed by international conventions but during the last War the English closed the Canal to prevent the Turkish forces occupying it. In the next War, diplomatic and military quibbling will find a ready way to violate the boasted neutrality of the Canal. The free and full ownership of the Canal is to be restored to Egypt when the present licence expires in 1968, but it is very doubtful if the demo-plutocracies will ever allow this vital link with the East to pass into non-European hands.

BIBLIOGRAPHY

The amount of literature on the subject of war, armaments and current international affairs is vast and growing. It will be difficult to compile a Bibliography on these matters so as to do adequate justice to the material available, but the following list is offered to such students of the subject as are interested in its detailed study. It will be noticed that some of these authors and their works have been referred to in this book.

I. General Works

Liddell Hart, *Foch, the Man of Orleans.* (A clever study of contemporary military) personalities especially " Dear Henri " Wilson.)

Ditto. *Through the Fog of War.* (In this book the author maintains that the second Great War of the XXth Century had started in 1936 and that each side is simply manoeuvring for positions. There is some exposure of British mistakes in the last War.)

Ditto. *A History of the World War.* (An admirable book by one of the greatest military experts of the age.)

G. F. Elliott, *The Ramparts We Watch.* (An intelligent policy of national defences is advocated for the United States in this book by an American War veteran.)

Morison, *War on the Great Cities.* (Deals graphically with the menace from the air to big towns.)

Air-Commodore Charlton, *The Menace of the Clouds.* (An expert account of the growing strategic importance of the air arm.)

General Douhet, (1) *The Mastery of the Air.* (2) *The War in 19—.* (Both these books are standard works used in War Schools and expound the idea of the "Total War" from the air with a view to a decisive victory.)

J. Langdon Davies, *Air Raid.* (Deals with the danger from the Silent Bombers and is strongly critical of the English A. R. P.)

Stephen Possony, *To-morrow's War.* (The contents of this book are well worth study, though the slightly propagandist aim of the writer is obvious; since his thesis is to prove that the totalitarian states look more formidable than they really are and that the Douhet School is out-of-date.)

Fritz Sternberg, *Germany and a Lightning War.* (This book belongs to the same category as Possony's and its anti-fascist bias explains its ready translation into English.)

Sir A. G. Stern, *Tanks—1914-1918.* (A revealing account of the success of tank-attacks in the last War. But are tanks so invulnerable as they were, seeing that trench mortars can now fire in flat trajectories and that anti-tank guns have been improved?)

Barbara Wortheim, *The Lost British Policy.* (A very pungent study in contrast between the present British Policy in Spain and their 100-year old historical policy which was one of a stern opposition to any Continental intervention in Spanish affairs.)

Quincy Howe, *England Expects Every American to do his Duty.* (A devastating study of blundering and weak-kneed British policy in recent months and the apathy of the masses.)

Major Sheppard, *Tanks in the Next War.* (Proves in a brilliantly objective manner that the tank has come to stay and that it has substantially altered the physiognomy of war.)

Commander Russell Grenfell, *Sea Power in the Next War.* (Deals with the new terrors to the big ships, *viz.*, the aeroplanes

and the subs, and the blow to the offensive spirit in naval warfare on this account.)

J. M. Spaight, *Air Power in the Next War.* (Definitely anti-Douhet in tone, but apprehends great harm to the civilian population in a future war. According to the author the fascist powers rely on a lightning raid and tend to "put all their goods in the shop window.")

Jonathan Griffin, *Glass-Houses and Modern War.* (A powerful plea for more A. R. P. than for more bombers; for security, rather than for offence.)

J. B. S. Haldane, *A R. P.* (A strong plea for democratic anti-raid preparations on Socialist lines.)

Charlton, Garratt, and Fletcher, *The Air Defence of Britain.* (A condemnatory picture of British Air rearmament and A. R. P. efforts with some useful suggestions.)

Philip Gibbs, *Across the Frontiers.* (A brilliant study of European politics from a journalist who is not a rabid anti-fascist and who believes that Germans may really not hanker after war.)

Iva Corinne Brown, *The Story of the Negro.* (A synoptic view of the Negro in the New World. Describes the white-man's burden as one of the pious phrases of Nordic egotism covering a shameless economic and territorial imperialism. An eye-opener to Oriental readers.)

Marquess of Londonderry, *Ourselves and Germany.* (A sympathetic account of recent German history and the rise of Hitlerism. Like Gibbs, the Marquis is a severe critic of the Versailles Treaty and French politics thereafter.)

Mario Missiroli, *What Italy Owes to Mussolini.* (An encomium on the great dictator for the part he has played in reshaping Italy internally in the last decade; shows how successful State-management can enrich and strengthen a country.)

S. Grant Duff, *Europe and the Czechs.* (A passionate and non-critical defence of the Benes policy; asserts the strate-

gical necessity of preserving Bohemia as a *point du appui* against Germany.)

Duchess of Atholl, *Searchlight on Spain.* (A heated and partisan account of the Spanish War by the Red Duchess.)

Genevieve Tabouis, *Blackmail or War.* (A somewhat one-sided criticism of the dictators by a Leftist French journalist who apparently is able to eaves-drop on all Cabinet meetings, if we can believe her dire prophecies.)

Victor Cornea, *What Next in Central Europe?* (A strong Roumanian plea for an anti-fascist security pact in Eastern Europe, under the aegis of the democracies.)

N. De Basily, *Russia under Soviet Rule.* (A solid and substantial study of Bolshevik rule by an *emigre* Russian; strongly criticises Soviet industrial methods and exposes the character of its administration.)

Erich Wollemberg, *The Red Army.* (A rambling book by a Trotsky admirer who sees the ruination of military efficiency by the "totalitarian terroristic despotism" of Stalin.)

Jane Soames, *The Coast of Barbary.* (Deals with the native question in Morocco, Algeria and Tunis, where according to the author there is a strong Home-Rule movement, inimical to France.)

Sir Hubert Young, *The Independent Arab.* (A study in Arab psychology and personality by a sympathetic writer).

H. C. Armstrong, *The Lord of Arabia.* (A biography of King Ibn Saud of Hejaj, which throws a vivid light on recent Arab history and reveals Saud as the strongest personality in the Near East to-day.)

Lowell Thomas, *With Lawrence in Arabia.* (A colourful narrative of the adventures of the greatest spy and trouble-maker of modern times. Reveals the genesis of Arab disappointment and Anglo-phobia.)

J. A. Hobson, *Imperialism, a Study.* (A damaging account of the "tricks of the trade" of advanced industrial nations, showing that aggressive post-War nationalism has its roots in the foreign policies of the late Allies.)

Sven Hedin, *Germany and World Peace* (A sympathetic account of Germany's rôle in recent European politics which should act as a corrective to violent Jew-inspired propaganda. The author believes that Germany will never go to war unless she is forced to do so by an invasion by another Power.)

Beatrice and Sydney Webb, *Soviet Communism: A New Civilisation.* (An encomium of everything Russian to-day, including the "treason trials" and the orgy of atheism in the country. Contains a good account of Soviet industrial methods.)

Ivan Savonevich, *Russia in Chains.* (Full of horrors of Russian prisons and concentration camps but defeats its own purpose by excessive propaganda.)

Edgar Mowrer, *Germany Puts the Clock Back.* (An "uncomfortably" realistic account of Hitler's rise to power and of the Nazi ideology.)

Horold B. Hurton, *America Gropes for Peace.* (A review of European events as they affect American policy; traces the War to English trade rivalry with Germany and exposes the futility of the American Neutrality Acts.)

McCartney and Cremona, *Italy's Foreign and Colonial Policy 1914-1937.* (Indicates the inevitable and inexorable trend of Italian foreign policy. Asserts that the Mediterranean problem is not settled and that Italy will not retreat from her avowed object of making this sea an Italian lake.)

Chaman Lal, *The Secrets of Japan.* (A well-informed and sympathetic account of Japanese life, industry and foreign policy.)

Ted O'Conroy, *The Menace of Japan.* (A violently one-sided account of the Japanese. The author finds nothing good in Japan, except perhaps the Japanese house-wives, among whom Mrs. O'Conroy was one.)

Willard Price, *Where Are You Going Japan?* (A study by an American journalist of Jap politics in Korea, Manchukuo and China. Gives room for grave uneasiness to British imperialists and exploiters in the Far East, by an emphasis on Japan's naval power.)

H. K. Tong, *Chiang-Kai-Shek: Soldier and Statesman.* (An authorised biography not free from "puffing." The author points out the weakness of China through civil wars "which are rarely ideological." Emphasises the Marshal's hostility to Communism, his great courage, patriotism, and sacrifice.)

Percy Noel, *When Japan Fights.* (A pro-Japanese account of recent happenings in the Far East; exposes the "atrocity" stories against Japan and the manipulations of European powers from behind the scenes.)

G. O. Allen, *Japan: The Hungry Guest.* (An objective study of Japan and its people, society and industry.)

Kiyoshi Kawakami, *Japan in China.* (A Jap's defence of his country's policy. Contains some illuminating incidents relating to British intrigues in the Far East.)

Edwin Borehard and W. P. Hage, *Neutrality for the United States.* (A critical review of Wilsonian and Rooseveltian foreign policy, with its venturesome and bellicose leanings towards foreign entanglements.)

Harold Butler, *Problems of Industry in the East.* (Considers the the awakening of 1,000 million Asiatics from their pathetic contentment as the greatest revolution of the age. Pleads for raising the standard of living in the East and looks with equanimity on prospects of speedy industrialisation there. A valuable book for Indian readers.)

Publications like the *Daily Mail Year-Book*, *The Times of India Year-Book*, and the League of Nations' *Armaments Annual* contain valuable information about armies and armaments. Papers like the *Statesman*, the *Hindu*, and the *Hindusthan Standard* often carried excellent articles from well-informed correspondents like Knickerbocker and E. A. Mowrer, who dealt with the Near and the Far East respectively and Brailsford, who dealt with European politics. Magazines, like the *Time*, *Foreign Affairs* and the *Journal of the Institute of International Affairs*, contain valuable contributions to the literature on the subjects of armaments, world affairs, and economic trends. The British War Office publication *Statistics of the Military Effort of the British Empire 1914-1918* is well worth reading. The Report of the Inter-Parliamentary Union (by various Authors), entitled *What would be the Character of a New War?*, is a treasure-house of information.

II. The Indian Forces

Regarding the Indian Army, literature is somewhat limited; but the reader is referred, *inter alia*, to the following publications:—

Vincent Smith, *Early History of India*. (Contains an interesting account of the Battle of the Hydaspes.)

Nilakanta Sastry, *History of the Cholas*. (A standard work on the subject.)

Ishwari Prasad, *History of Mohammedan India*. (Throws some vivid sidelights on the armies of the Delhi rulers and that of Sivaji.)

Jadunath Sarkar, *Sivaji*. (A careful account of Sivaji's life and military activities.)

Broome, *Bengal Army*. (An authoritative book, full of little-known information about the early English Armies in India.)

Dodwell, *Sepoy Recruitment*. (A standard book which unconsciously vindicates the early Sepoy.)

Father Sewell, *The Forgotten Empire*. (Contains a good account of the Vizayanagar army.)

The *Imperial Gazetteer* also deals with the early history of the Sepoy armies. *Reports* like those of the Skeen and the Esher Committees will repay study. The Government of India have issued some excellent publications on the organisation of the Indian Army and a reference is invited to *The Army in India and Its Evolution*.

III. Miscellaneous

The number of "Peace" books is large, though it is naturally diminishing in the face of the rising tempest of international bellicosity. The following are some of the important books on peace, war economics and allied subjects:—

Sir Norman Angell, *The Great Illusion, Now*.

Ditto. *Peace with Dictators?* (Sir Norman makes out a strong, if not a convincing, case for a type of collective security which would entrust defence to a sort of Mutual Insurance Corporation of the nations.)

Bertrand Russell, *Which Way to Peace?* (A powerful plea for disarmament; contains a critical review of the air menace and the vanishing sea power.)

N. M. Butler, *The Family of Nations*. (An appeal to English-speaking peoples to maintain the best traditions of their liberalism, freedom and peace.)

Signor Madariaga, *Disarmament.* (The Author is not very enthusiastic about British naval power; sincerely advocates slowing down the tempo of militarisation. This veteran Spanish statesman is a believer in the League of Nations.)

Various Writers, *War and Democracy.* (A Labour Party symposium on the causes and cure of war. Suffers from bias but maintains a scientific approach. Tries to prove that pugnacity among nations exists and that war is due to Nationalism. The cure for war is the strengthening of Democracies according to this book.)

Pigou, *Political Economy of War.* (A deep analysis of the economics of war and of the ultimate sources of war finance.)

J. M. Keynes, *The Economic Consequences of the Peace.* (A fearless exposition of the injustice and cruelty of the Versailles Treaty.)

Adolf Hitler, *Mein Kampf.* (A passionate, high-strung apologia for Nazism as its High Priest conceives it.)

Lord Grey, *Twenty-five Years.* (England's Foreign Secretary at the beginning of the War tells the story of its beginnings. A critical reader will find strong evidences of British smugness and intolerant superiority in striking contrast to the Chamberlain methodology.

Benito Mussolini, *My Autobiography.* (A revealing picture of this blacksmith's son, his early trials, his political conversion and later success.)

John Ise, *Oil in American Politics.* (An exhaustive treatise on oil and oil politics.)

P. M. Rae, *The £. s. d. of National Defence.* (The financial side of the war economy is ably discussed here.)

Lionel Robbins, *Economic Planning and International Order.* (The Author concludes that national planned economies and international chaos are necessarily inter-connected.)

Paul Einzig, *The Bloodless Invasion.* (An account of what Dr. Einzig calls "the new menace of German economic and political penetration" in South Eastern Europe.)

Emeny, *The Strategy of Raw Materials.* (A book which everyone interested in India's military rejuvenation should read.)

Visvesvaraya (Sir M.), *Economic Planning in India.* (An able book by an author, who is economist, statesman, business-man and engineer combined.)

J. C. Brown, *India's Mineral Wealth.* (An authoritative account of the mineral resources of India, based on the Reports of the Geological Survey of India.)